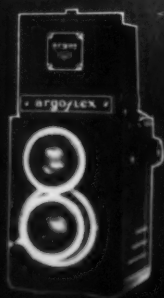


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SALONS AND EXHIBITS

★ FOLLOW-UP & A RECOMMENDED PRACTICES

Closing Date	Name of Salon	For Entry Blank, Write to	Number of Prints and Entry Fee		Dates Open to Public
Exhibit to see	Seventh Annual Finger Lakes Salon.				Cayuga Museum of History and Art, Auburn, N. Y., June 9-30
Exhibit to see	★San Francisco International Salon.				de Young Art Museum, Golden Gate Park, San Francisco, Calif., June 10-July 4
Exhibit to see	Seventh Annual Salon of Rockefeller Center Camera Club.				Museum of Natural History, New York, N. Y., July 1-15
Exhibit to see	★Eighth Memphis Pictorialists Salon.				Brooks Art Gallery, Memphis, Tenn., July 1-31
July 2	★14th Detroit International Salon of Photography.	Detroit Institute of Arts, Detroit 2, Mich.	4	\$1.00	Detroit Institute of Arts, Detroit, Mich., Aug. 5-Sept. 2
July 10	★Sixth Annual North American Salon.	Paul H. Guttman, Salon Chairman, 1528 39th St., Sacramento, Calif.	4	\$1.00	E. B. Crocker Art Gallery, Sacramento, Calif., Aug. 1-31
July 15	1945 Annual International Salon of Muncie Camera Club.	Joe Sanders, Salon Chairman, Muncie Camera Club, 122 W. Charles St., Muncie, Ind.	4	\$1.00	Arts Building, Muncie Fairgrounds, Muncie, Ind., July 29-Aug. 4
August 15	Eighth Annual Rocky Mountain Salon of Photography.	Mr. Basil Leonoff, 1435 S. Milwaukee St., Denver 10, Colo.	4	\$1.00	Denver Art Museum, Denver, Colo., Sept. 1-15
August 25	Fifty-fourth Toronto International Salon of Photography.	F. L. Harvey, Toronto Camera Club, 2 Gould St., Toronto 2, Ont., Canada.	4	\$1.00	Eaton's Fine Art Galleries, Toronto, Canada, Sept. 10-22
September 1	★Amarillo International Salon (formerly Tri-State Salon).	Cy Clemmons, 216 Nunn Building, Amarillo, Texas.	4	\$1.00	Arts and Crafts Center, Amarillo, Texas, Sept. 16-30
September 10	★Fifth Annual Victoria International Salon of Photography.	Irvine Dawson, Salon Director, 680 Victoria Ave., Victoria, B. C., Canada.	4	\$1.00	Empress Hotel, Victoria, Canada, Oct. 7-14
September 23	★Second International Color Slide Salon.	Frin Vanden, 620 N. Michigan, Chicago 11, Ill.	6	\$1.00	Chicago Historical Society, Clark St. and North Ave., Chicago, Ill., Oct. 7-15
October 10	★Tenth International Salon of Photography of the Photo Pictorialists of Milwaukee.	Donald K. Meehan, Salon Chairman, Photo Pictorialists of Milwaukee, 740 N. Plankinton Ave., Milwaukee, Wis.	4	\$1.00	Milwaukee Public Library and Museum Bldg., Milwaukee, Wis., Nov. 4-18
October 15	Thirty-sixth Chicago Salon.	Chicago Camera Club, 137 N. Wabash Ave., Chicago 2, Ill.	4 Monochrome and/or 4 color	\$1.00	Chicago Camera Club, 137 N. Wabash Ave., Chicago, Ill., Nov. 5-Dec. 4

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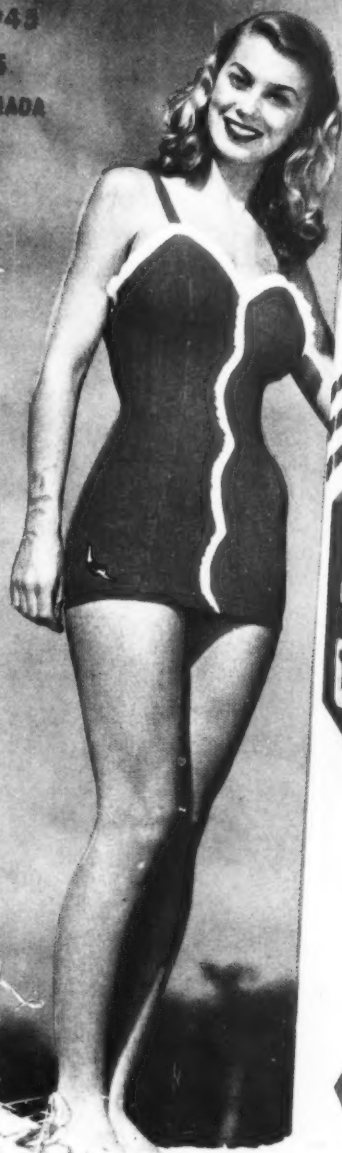
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★ Minicam Photography

TABLE OF CONTENTS FOR AUGUST, 1945



Articles

FOUR FANCIFUL FOTOGRAFIC FLIGHTS	ED BURKS	18
I'VE BEEN WORKING ON THE RAILROADS	STUART COVINGTON	22
PHOTOGRAMS FROM SMALL PLANTS	WELLINGTON LEE	30
COLOR PROBLEMS	EARL THEISEN	32
FREE LANCE PHOTOGRAPHER	SYDNEY GREENBERG	42
CHARACTERS ARE A CINCH	HARVEY W. BROWN	48
GOT A MATCH?	BOB KREIDER	54
MAKE PHOTOSTATS AT HOME	MARTIN VOS	61
I SHOOT BIRDS	HAL H. HARRISON	64
HIGH PRIEST OF DANCE PHOTOGRAPHY	HERMAN G. WEINBERG	70
CREATIVE PHOTOGRAPHY	AUDREY GOLDSMITH	76

Departments

LAST WORD	10
PHOTOGRAPHIC INSTRUCTORS	12
PHOTO MARKETS	14
PHOTO DATA CLIP SHEETS	78
CAMERA CLUB NEWS AND IDEAS	82
NEW PRODUCTS	84
GADGETS, KINKS AND SHORT CUTS	86
SALONS AND EXHIBITS	110

Cover from an Original Ansco Color Transparency



Theisen—"Color Problems"—page 32

MINICAM'S \$100 CONTEST CLOSES SEPTEMBER 16. DETAILS, JULY ISSUE, PAGE 85.

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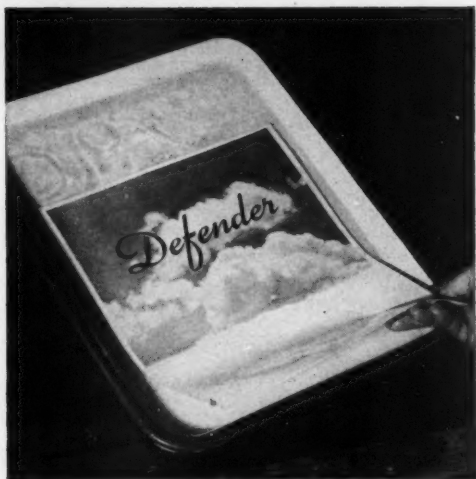


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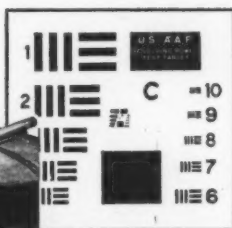
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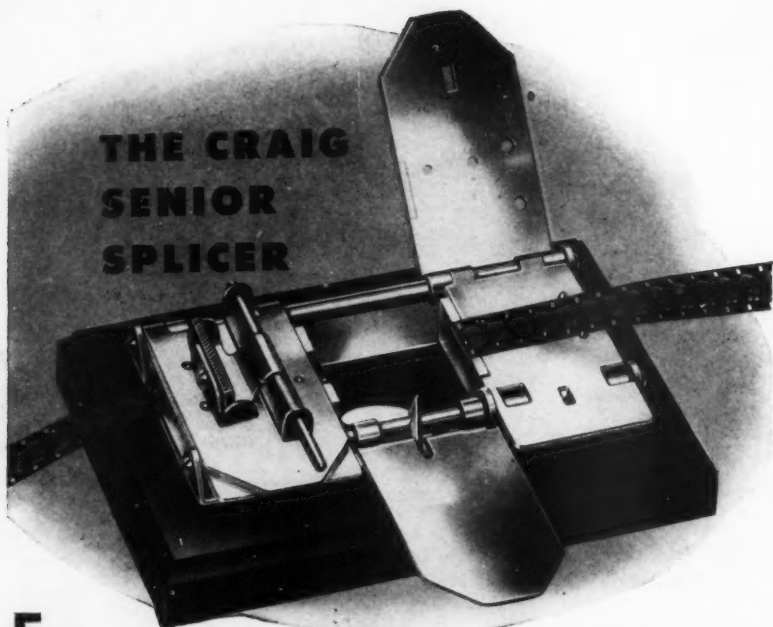


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2. The speed with which SMP graduates attain success is often truly startling! Already reaping rich rewards from the courses he completed only a few short months ago is LIONEL VALLIERE (above). Valliere now operates his own successful studio in Maine.



3. Exceedingly attractive to camera careerists are the modern, personalized instruction, the professional-type studios and labs at the School. Quick to benefit was graduate JOHN J. MCGOWAN (above), now sports newspaper cameraman.

4. A man's world? Not in photography! SMP Placement Bureau shows that feminine graduates move ahead fast! Case in point is LIL KRAUSS (right) who now assists famous photog George Platt-Lyones. For talented careerists, leading studios look to THE SCHOOL OF MODERN PHOTOGRAPHY!



5. Information Please! "What about tuition fees?" Specialized courses, day or evening, are exceptionally moderate. Visit the School, or write for outline of courses. Address H. P. Sidel, director, Dept. M8.

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W. S. WOLF,
41 "A" Street,
Fairfield, Ohio.

Jog

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I enjoyed your article "The Drama of Objects". Whatever jogs a photographer to think differently, or just to think, is good. Even if the pictures themselves are no great shakes, they stir us up.

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Minicam's Annual List of Photographic Teachers

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ENSLEY HIGH SCHOOL, Birmingham, Alabama. Photography taught as an extra-curricular activity by O. A. Farr during winter months if there are enough interested students. No charge for instruction.

ARIZONA

TUCSON SENIOR HIGH SCHOOL, Tucson, Arizona. H. A. Goldstein, P.S.A.; Otis H. Chidester, Instructors. Elementary and advanced photography. Students may attend for one or more hours a day for full credit. Well equipped darkrooms. On assignments for the three school publications, students use school owned cameras. Cost for pictures is borne by the publication desiring the photographs. Students pay only for photographic paper and film used on personal projects. No cost for course. Prerequisite for advanced photography is completion of elementary photography or its equivalent. Courses are given during the regular school year.

ARKANSAS

HENDRIX COLLEGE, Conway, Arkansas. Non-technical course "for fun and creative experience" taught by Paul Faris during Spring term. No prerequisite required. Work is varied to suit abilities of individual students. Four hours a week for eighteen weeks; two semester hours of credit given. Laboratory. Tuition \$15 if taken separately; less if taken as a part of full college course.

CALIFORNIA

HUMBOLT STATE COLLEGE, Arcata, California. Elementary Photography, Advanced Photography, Applied Photography, offered by Physics Department. Dr. Wm. Lamphere, Instructor. One hour lecture and three hours lab work a week in Elementary; hours for other two courses to be arranged. Tuition, \$2.50 for 5 units or less of credit; full load is \$10.50. Spring term for Elementary, either semester for other two; 18 weeks duration.

FRESNO STATE COLLEGE, Fresno, California. Art Department and Science Department offer courses in photography—developing, printing, portraiture, making pictures for magazine illustration and advertising purposes, enlarging, copying. Two lecture hours; four lab. hours per week. Student cannot specialize in photography only. \$22 per semester; 18 weeks.

HAYWARD EVENING HIGH SCHOOL & HAYWARD UNION HIGH SCHOOL, Hayward, California. Melvin Rush, Instructor. Elementary and advanced photographic practices. The day school is free, but there is a 50 cents registration fee for the evening school.

(Continued on page 94)

"I WANTED TO COMBINE A CAREER WITH MARRIAGE



...and Photography Makes Both Possible"

Says Eva Myrlette Osborne

Another Topnotch Photographer Whom N. Y. I. Helped Win Success

"During the last few months of my high school training I looked around for a profession in which a woman could not only find real opportunities, but could also combine a career with marriage. Having dabbled in amateur photography, I decided that was the field for me and enrolled at New York Institute of Photography."

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* From a letter dated April 11th, 1945.
All photographs on this page by Eva M. Osborne.



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Editorial Secretary, Minicam Photography

Coast Artillery Journal, 631 Pennsylvania Avenue, N. W., Washington, D. C., writes: "We want action photos, primarily of Coast Artillery Corps weapons or personnel. It is unlikely that civilians (other than war correspondents) could be at the place and time to take pix we can use." Payment is \$5.00 per photo, on publication.

American Journal of Safety, 1980 East Eighth Street, Brooklyn 23, N. Y. H. H. Kafka, Acting Editor, writes that his magazine is in the market for motor vehicle and aviation pictures, but please do not send any photographs before writing a letter of inquiry to find out if Mr. Kafka is interested in the type of picture you have. This magazine had been discontinued during European war. Inquiries are invited from anyone. Payment is made upon acceptance.

Institutions Magazine, 1900 Prairie Avenue, Chicago 16, Ill. Can use photographs pertaining to institutions such as hotels, hospitals, YMCA's and YWCA's, industrial cafeterias, restaurants, that feature service activities or equipment installations. These should be black-and-whites. Payment is \$5.00 per picture.

Indian Motorcycle Company, 837 State Street, Springfield, Mass. M. C. Keever, Advertising Manager, writes that they want cover photos for their house organ. Also pictures showing motorcycle riders where some action or story is connected. Pictures of Police Departments using Indian motorcycles. Payment is \$2.00 to \$5.00, depending on subject matter.

Flying Age Magazine, 64 West 44th Street, New York City. Mr. Roel I. Wolfson, Editor. Can use both black-and-whites and Kodachromes of anything concerned with aeroplanes. Payment is \$5.00 for black-and-whites, and \$100 up for Kodachromes, made on publication.

Western Flying, 304 South Broadway, Los Angeles 13, Calif. Lawrence Black, Editor. Black-and-white shots that are of interest to the aircraft owner or operator, or to the airline operator or manufacturer. Payment of \$1.00, and up, depending on quality, made on publication.

Outdoor Guide, 300 Landers Building, Springfield, Mo. Black-and-whites or animals, fish, any outdoor sports. Cover possibilities of boating, hunting and fishing subjects. Pays up to \$3.00 cash.

The Four Wheel Drive Auto Company, Clintonville, Wis. Wants action photographs of FWD four-wheel-drive trucks used by federal, state, county, township and municipal highway departments. Also, photographs of FWD trucks in various fields of application such as logging and lumbering, high-speed transport, fire-fighting service, coal hauling, school busses, etc. Inquiries are invited from commercial photographers and serious-minded amateurs who have professional-type equipment. Must have negatives—prefer 8x10 but will accept 4x5 negatives. Payment is \$2.50 to \$5.00, immediately upon acceptance.

Home Gardening for the South, 814 St. Louis Street, New Orleans 16, La. Camilla Bradley, Editor, writes: "We publish glossy black-and-whites of flowers, garden furniture, flower arrangements and related subjects. Only pictures of plant material adaptable to the Deep South are accepted." Rates vary according to photo; payment made on acceptance.

Architectural Forum, 350 Fifth Avenue, New York City 1. Wants glossy prints of architectural interiors and exteriors.

Modern Stationer and Modern Retailing, 250 Fifth Avenue, New York City 1. David Manley, Editor, wants pictures of window displays and interiors of stationery and office supply stores for his two magazines. Payment is \$2.00 to \$5.00, made on acceptance.

Free-Lance Photographers Guild, Inc., 219 East 44th Street, New York City. Wants Kodachromes suitable for magazine covers and calendars. Payment is \$50 to \$250, at time of sale.

Foster & Davies, Inc. Advertising, Keith Building, Cleveland 15, Ohio. Interested in photos for advertising use. (Release needed on good-quality, black-and-white human-interest models.) Likes action pictures of children and pets. Needs flash-bulb shots and outdoor pictures. Be sure to give exposure data, make of flash bulb and exposure meter. Payment is \$25 for accepted prints. Not interested in portraits or still-life pictures; no color.

Movie Stars Parade, 295 Madison Avenue, New York 17, N. Y. Pat Murphy, Editor. Photographs of film personalities and musical radio personalities. Payment is \$5.00, made on acceptance.

The Oliver Corporation, 19300 Euclid Avenue, Cleveland 17, Ohio. Wants action photographs of Cletrac Crawler Tractors in all kinds

of operations under actual operating conditions—no posed photographs. Payment is \$5.00 for accepted black-and-whites.

Air Trail Pictorial, 122 East 42nd Street, New York City 17. William Winter, Editor. Wants picture features on all aspects of aviation, particularly with lightplanes, lightplane flying and air education. These are black-and-whites. In color, interesting close-ups of modern aircraft, both military and commercial, are wanted for covers. Some added element to give human interest is recommended. Payment is \$25 to \$150, made on acceptance.

American Business, 4660 Ravenswood Avenue, Chicago, Ill. Photos of ultra modern offices with people at work; ultra modern private offices of business men. All photographs must tell a story. Payment is \$5.00 up.

General Electric Exposure Meter, 2116 Keith Building, Cleveland, Ohio. Can use good-quality black-and-white photos made by users of G-E meter. Especially interested in human-interest pictures, action shots of children and pets. For advertising use; releases must be available from models. No portraits, still life or landscapes. Payment is \$25 for accepted prints. Eight by ten glossies preferred; any size print for approval purposes.

Rainbow Color Prints, P. O. Box 1745, Washington, D. C., wants Kodacolor negatives suitable for use in advertising the splendor of Rainbow Color Enlargements. Submit color print only for approval. Negotiation for purchase of negatives will be made if print is suitable. Payment depends on picture appeal.

Leaves, 8800 S. Archer Avenue, Willow Springs, Mich. Edward J. Kubaitis, Editor. Needs photographs of Catholic religious subjects, especially character studies of priests, nuns, clerics, Mass and other ceremonies, artistic photos of churches, exterior and interior. Will pay minimum of \$5.00 up to \$10.00, on acceptance. No snapshots or color.

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CONTEST RULES

1. This contest is open to all individuals who are not professional motion picture producers. Any officer or employee of International Theatrical and Television Corp., members of their families or any of the judges, are automatically excluded from entering.
2. Films can be made on any millimeter stock, except 35mm in 8mm film stock. They may be in black and white or color; they may be silent or sound. No film with sound on discs will be accepted, and no films, or any part thereof, for which monetary compensation has already been given.
3. Films of any length, that meet the other requirements will be accepted.
4. Films falling into any of the following categories will be accepted: dramatic, story, or entertainment films; travel films; nature study films; record films; religious films; educational and scientific films; documentary films; historical films, family films; industrial films, etc.
5. An individual contestant may submit as many separate entries as desired. Each entry, however, must be accompanied by an individual entry blank or reasonable facsimile thereof, and each film must bear the name and address of the contestant on both the film container and on the film reel.
6. All entries in the contest must be forwarded to International Theatrical and Television Corp., 25 West 45 Street, New York 19, New York by prepaid parcel post express or messenger. I.T.&T. will return to the contestant, all, except the eleven prize winning films, as soon after the contest judging as is possible by First Class mail. All entry blanks must be sent by the United States express. All entry blanks must be exercised by I.T.&T. must pay duty, forwarding charges, and taxes, if any, in sending and receiving of film.
7. Although every reasonable care will be exercised by I.T.&T. and its agents, in the handling of contest films while in the company possession, I.T.&T. cannot accept responsibility for the loss of, or damage to, films submitted.
8. The films winning the eleven prizes shall automatically become the property of International Theatrical and Television Corp. and I.T.&T. by the payment of \$10,000 for the first prize and royalties for the following ten prizes, which royalties shall be 50% of the net sales revenue less cost of prints, censorship, music, sound, and recording royalties, take over all further rights to the picture. I.T.&T. reserves the right to stop distribution of these films at the end of two years from the date of contest closing.
9. Submission of an entry in the contest shall constitute an agreement on the part of the contestant to abide by these contest rules and regulations. It shall further be understood by the contestant that the decision of the judges is final and that neither I.T.&T. or the judges can undertake to engage in any dispute regarding this decision.
10. The contest shall be open on July 1, 1945 and shall be closed on July 1, 1946. All entries must be received in the office of International Theatrical and Television Corp. on or before July 1, 1946.

10 BIG ADDITIONAL PRIZES

For Best Amateur Motion Picture On Any Subject

Attention all amateur motion picture producers! Here is the chance you've always wanted. Now your own motion picture can earn you big money — and all the glory that goes with being a producer of a commercially distributed film.

Anyone may enter. There's nothing to buy and nothing to sell. Your production may be on any subject — any length!

Why this contest? To stimulate and help develop better amateur motion picture production!

Ten internationally famous judges will select the winners. Names of judges will be announced shortly.

Get started now! The contest will close July 1, 1946, and all entries must be received prior to that date. Write I.T.&T. Contest Editor for complete details and your entry blank today.



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Please send me complete details and entry blank for your big \$10,000 Amateur Motion Picture Contest.

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TANK PRISMS

90-45-45 degree prism of huge size—3 1/4" long, 2 1/4" wide, finely ground and polished. Used to build a Periscope... excellent also for experiments, classroom demonstrations at high schools, colleges, camera clubs, astronomy clubs. Some of our ingenious customers have used these Prisms to make camera stereo attachments, photometer cube, range finder, etc. Normally, these Prisms would retail from about \$24 to \$30 each.

SILVERED TANK PRISM—90-45-45 degree, 5 3/4" long, 2 1/4" wide, finely ground and polished. Would normally retail from \$24 to \$30 each.

Stock #3004-M.....\$2.00 each Postpaid (Illustrated booklet on Prisms included FREE)

FOUR SILVERED TANK PRISMS—Special—\$7.00 Postpaid. This is the most sensational bargain we have ever been able to offer.

PORRO PRISM SET FROM ARMY'S 6 POWER BINOCULAR

Consists of 2 Porro Prisms to make an erecting system for a Telescope.

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Stock No.	Item	Price
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3018-M	Pentagon Prism.....	.75 each
3014-M	10 Pieces Circular A-1 Plate Glass (Diam. 31 mm.—for making Filter).....	.25
1004-M	2 Reducing Lenses.....	1.20
3001-M	Lens Surface Prism.....	2.00 each
803-M	No. 1 Sable Hair Lettering Brush.....	1.00 dozen
3021-M	Amici Roof Prism (3rd Grade).....	.25 each
4009-M	Heat Absorbing Glass 4" x 5".....	.35 each
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923-M	Six Threaded Metal Reticle Cells.....	.25
26-M	First Surface Aluminised Mirror, Diam. 1 1/4".....	.25 each
1027-M	Perfect Plano-Convex Lens, Diam. 12.5 mm., F. L. 20 mm.....	.30 each
624-M	Neutral Ray Filter size 4 3/4" x 2 1/4".....	.25
3022-M	Round Wedge 65 mm. Diam.....	8.00 each
3036-M	Roof Prism—80 degree.....	4.00 each
23-M	1 1/4" wide.....	.25 each
704-M	Inclinometer—Aircraft type.....	.25 each
	Lens Cleaning Tissue, one ream (480 sheets) size 7 1/4" x 11".....	1.50
6002-M	Educational Set, 1 blank and 1 finished Porro Prism (3rd grade).....	.25 set
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1 Red and 1 Yellow Filter in following Diam.

20 mm. (seconds).....	40c	45.5 mm. (seconds).....	90c
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For copying, **ULTRA CLOSE-UP SHOTS**, macrophotography, experimental optics, magnifying and for making a two power 1/16 Telephoto Lens, "Dummy Camera," Kodachrome Viewer, **DETACHABLE REFLEX VIEWFINDER** for 35 mm. cameras, stereoscopic viewer, ground glass and enlarging focusing aids, **TELESCOPES**, low power Microscopes and for many other uses.

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KELLNER EYE PIECE LENS—Focal Length 1 1/4 inch. Diameter of eye lens 16 mm. Diameter of field lens 25 mm. Eye achromat already cemented.

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WAR SURPLUS ACHROMATIC LENSES

Stock No.	Dia. in mm.	F. L. in mm.	Comments	Price
6019-M	15	41	Cemented	80c
6111-M	16	36	Cemented	75c
6094-M	16	75	Cemented	\$1.00
6115-M	46	108	Cemented	\$1.00

USES—Use these Lenses for making Projecting Lenses, Low Power Microscope Objectives, Corrected Magnifiers, stereoscopic enlarging Lenses, Eye-Piece Lenses, Macrophotography, gadgets, optical instruments, etc., etc.

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Complete set mounted components. Rugged, strong, originally constructed for U. S. Tank Corps. Consists of 2 fine Periscope Mirrors mounted in metal and plastic. Only plywood body frame is required to finish this exceptional Periscope. First surface mirror is well protected by glass windows. Set weighs 2 1/2 lbs. Overall length of mount 6 1/2", width 2 1/4". Would normally retail at \$40 to \$50.

Stock #700-M.....\$3.00 Complete Set Postpaid

Two Sets (4 Units).....Special \$5.50 Postpaid

SATISFACTION GUARANTEED



FOUR FANCIFUL FOTOGGRAPHIC FLIGHTS

LAST CIVILIAN FLING BY ED BURKS NOW IN GUAM

WE COULD begin this dance by asking: "Has Your Psychiatrist Tasted Different Lately?" But a lot of literal-minded people read this magazine. So, we won't say it.

We will say that the accompanying photographs aren't intended as art, nor are they "pictures with a message." And it isn't necessary to look in a concave mirror to get in the mood of doing them. Or to have dreamed the night before of a milkmaid chasing a bull with a bucket.

Thing is: if you are struck by a slightly wacky idea and feel the urge to dramatize it photographically go ahead. It's a good photo-laxative and you'll have a lot of fun doing it. And that's important in pho-

tography, as any other endeavor. We musn't let ourselves become too serious, or take our own efforts too seriously. Life is much too short for using the camera exclusively as a plow. Set it to a conga rhythm once in awhile.

Easy? Not exactly. Did you ever try to make a rooster stay perched on a plaster head when he's accustomed to a barnyard fence?

Consider "Conscience in a Tap Room." You have a freshly-broken egg in a wine glass and the artificial eye keeps bobbing over and the pupil won't look up at the camera. And you're afraid the yolk will break and the yellow fluid will moil the clear white. (Grisly, isn't it?).



CONSCIENCE IN A TAP ROOM . . . SAYS ED. BURKS



NIGHT OVER BROOKLYN

ED. BURKS



On certain secluded beaches in California, nudes may be photographed. We had set up shop at the base of a large dune and were clicking away when we heard a cheery whistle approaching beyond the crest. (The picture only shows a section of the girl, but the rest of the body was there.) As we looked up, a beach stroller was absorbing the view with wide-eyed disbelief. His feet tangled, he fell on his face and rolled up in a shower of sand by our camera—then got up, looked neither right nor left, and walked on. He still didn't believe what he'd seen and was darned if he'd give the lie to his eye by saying even one word.

In spite of the national ribbing of Brooklyn, we feel a certain kinship toward this quaint settlement. We once lived across the river from it for a year. We

could take off on aesthetic flight, jet-propelled, and say that this picture represents the way our psyche flutters when we dream of Brooklyn after drinking absinthe and watching flies play leap frog on the ceiling. That despite certain not-so-polished customs of the inhabitants. The stars look serenely down on Brooklyn: making it one with the universe—cohesively, inflexibly, adamantly a part of the brotherhood of man. But that would be high-flown hooey. We had a sly thought about Brooklyn and this is the photographic result.

Go ahead. Try it. If you like the results—good. If your friends like them—fine. If they irritate fellow photographers and editors—wonderful! You must only begin to worry if they are dismissed with a casual glance.



I've been working on the RAILROADS

NORTHERN PACIFIC transcontinental passenger train, "The North Coast Limited," photographed in the early evening at Wadena, Minn., by Leslie Fox of the *Wadena Pioneer Journal*. While the giant locomotive is in silhouette, the rear cars are illuminated by the station platform lights.

NOTES ON AN OLD REFRAIN . . . BY STUART COVINGTON

THE IRON HORSE, unlike its flesh and blood brother, readily poses for a picture full of action and contrast.

There's a thrill in capturing the glamour and the pulsing romance of railroading on a piece of film; the throbbing power of a giant freight jack as she knuckles down to a stiff grade or the glistening beauty of a chromium streamliner gliding across the shadowy prairies just at dusk. Though I've written railroad yarns and snapped pictures of the iron horse for nearly half my life span, I've never lost my love for the rails. A locomotive whistle is a sort of Pan's pipe, an irresistible invitation to the tracks.

Now, after V-E Day most lines welcome

any who cares to brave the cinders for a shot of the iron horse in his lair. If you want to photograph in the yards, get permission first from the station master.

Railroad photography is roughly divided into seven groups: straight speed shots, pictorial shots, distance shots, angle shots, night shots, silhouettes and color shots.

In making action pictures the photographer should reach his selected spot about ten minutes before train time so he will have plenty of time to focus his camera in the proper direction. The special advantage of trains over some other types of action shots is that their path of action is definitely fixed.



JUST TO PASS THE TIME AWAY

FRISCO LINES

I learn in advance, if possible, whether the approaching train is a fast passenger or freight or a slow "drag" so as to judge it for speed. Passengers average sixty to seventy miles per hour in open country

(except locals), redball freights forty to fifty, and long coal trains and mixed freights thirty to forty. Of course, a hill may reduce the speed to as low as 10 or 15 miles per hour for all trains.

Try to get the sun behind the train, not shining upon it, so as to avoid deep shadows, or else let the train be heading into Old Sol when it has dropped about 30 degrees on the horizon. Try to find a very slight upgrade, so the hogger will be "working his throttle" and there will be plenty of smoke pouring from the stack. On a downgrade or level stretch he may "shut off" with a resultant lack of such plumage for the locomotive. For best effect station yourself about ten yards at a right angle from the rails and shoot when the engine is approximately ten yards from you. If you want the whirling drivers in the photo, move about three yards closer and allow the train to come opposite you. I do not say this is the universal method; it is only my own.

A railroad photographic friend of mine says: "I know you enjoy pictures of trains with the sun behind the train. Personally, I find that one loses most of the detail of the locomotive, in shooting with the sun behind the train. I take only pictures which I can get with the sun behind me, shining full upon the locomotive and train. I always use an exposure meter, and aim to arrive at the spot about 10 minutes before the train is due so that I can pick out a spot free from weeds, poles, or other obstructions. I want nothing between the train and my camera. In sighting my camera, I always aim for the tracks to join the horizon, just at the edge of my viewfinder, then allow the train to come as close to the other edge as I can, before exposing the picture. I find that I can get better centered views, with a larger image, in this way. While the front of the train is moving extremely fast in the viewfinder, the rear of it is scarcely moving at all."

Concentrate on the engine. If you attempt to cram too much of the train into the shot, you'll miss the front end of the locomotive. If possible, catch the bell while it is ringing and by very alert shutter clicking, get it with an open mouth.

Be very careful about cloud patches and the type of sky. Clouds are bad be-



MILWAUKEE ROAD NO. 29



HENRY J. McCORD

[25]

cause they blend with light colored smoke, and dark clouds can ruin an otherwise excellent shot. Half an inch of sky on a postcard size print is plenty.

Good railroad speed subjects are legion: easily obtainable and endlessly fascinating. For my part, the most dramatic shots are those of hotshot freights, an ebony plume of smoke unfurled over their swaying cars like a dreary funeral pall, their drivers whirling in a smashing symphony of power.

Still better subjects are double headers; two sets of drivers flashing in the sun, twin stacks vomiting billows of smoke into the heavens. In these cases it is best to shoot about fifty feet from the rails so as to accentuate the side rather than the head-on views. Otherwise it is almost impossible to get a good view of the second engine into your picture. If the sun is too far down on the horizon, the first engine may throw back too many shadows on its mate. Morning, or early afternoon until 4 p.m. are the best time for such

shots. It is well to use the fastest film your camera will take.

You could inquire of railroad men in your neighborhood where the nearest steep grade exists. This may take footwork, but the resultant photos will be well worth the effort. Try to ascertain the schedule of the train using the largest engines and carrying the heaviest tonnage. These will make a more dramatic picture. Once you are "on location," scout the surrounding terrain for the best possible vantage point; one free from overhanging cliffs and with a minimum of undergrowth. It is best to station yourself near the top of the grade, revealing as much as possible the steep ascent encountered by the locomotives. Shoot from a crouching stance, thus exaggerating the size of the engines and getting as much smoke as possible into your picture. *Sight by the locomotive stack. Get that into the center of your finder, then drop your camera about a quarter of an inch.*

Tunnel shots sometimes possess high

WHITE LEADED

LINN H. WESCOTT

IDLE LOCOMOTIVES covered with snow make a pattern as they are held in dead storage.





THE STEEPEST and most spectacular portion of the cog railway up Mount Washington crosses a trestle called Jacob's Ladder. From the collection of H. S. Walker.

pictorial quality. These must be snapped before the train emerges too far from the tunnel mouth for a good effect. One way to insure snapping them at the right second is to ascertain the length of the tunnel in advance, figure the approximate time the train will require to pass through and then time yourself accordingly when you hear your quarry rush into the other end. It is easiest to shoot only slow freights for

such views. Head-on pictures are best and the photographer should stand about 150 feet from the tunnel mouth, close to the rail. Unless trying for an angle shot, hold the camera about chin high and lean slightly forward to snap the picture.

ULTIMATE in all photographic artistry is a shot of a long train pounding across a high bridge. The architecture of

the bridge, the spiderwork of truss shadows thrown upon the cars, and the surging water beneath present an excellent opportunity.

In this case it is preferable to have a mid-afternoon sun at your back. Perch as close to the bridge as possible and try to get the entire structure into your picture. Unless the train is too long, wait until it fills the entire bridge and is about fifty yards from your end. Shoot downwards, so as to accentuate the bridge's height and the swirling water beneath. Other excellent pictorial subjects include rotary snow plows bucking tall drifts, long freights roaring onto sweeping curves and fast trains emerging from deep cuts.

A number of such photos have been salon and contest winners, often taking top honors. There are also many well-paying markets for good, unusual railroad photos: *Railroad Magazine*, *Trains*, *Tracks*, *Locomotive Engineers Journal*, and numerous general magazines. Most complete photo albums include at least one large train shot, frequently several. Newspaper rotogravures make regular use of such material, occasionally running full page features on some particular phase.

Each railroad's rolling stock bears hallmarks readily discernable to the veteran fan. This author's choice has long been the Frisco and the Southern. The former because of the immaculate condition of the motive power and its clean, graceful lines, and the latter because of its delightful herd of "little engines" as well as big power; exquisite American types and Moguls, wonderfully remindful of the days of woodburners and oil lamps. Both roads keep their power beautifully striped in gold and yellow, and adornments such as stars and wings give each locomotive a personality all its own.

Angle shots are easily obtained with railroad subjects. Trains may be shot from track level, the photographer lying on his belly with the camera pointed at a 45° angle, or from an overhead bridge or hillside. Best shots of this sort are obtained when the bridge or hill is not more than 75 feet above the tracks and the

train not more than 20 yards distant. Any imaginative enthusiast can also devise unique shots of caboose marker lamps, driving rods of locomotives or the stack or headlight of the iron horse.

Distance shots of trains are also challenging. Even from a quarter of a mile, lots of action can be portrayed with a good lens. Distance enhances the photo, lending the train a pleasing doll-sized appearance in its entirety. I like, too, the pleasing sunlights of such a picture, especially should Old Sol be peeping from behind a cloud or his rays shining down in a direct stream. Get from 1,000 to 3,000 feet away from your subject and aim your camera carefully, holding it about breast high or attaching it to the average tripod.

WHEN dusk falls, the magic of the camera lens increases ten-fold. Then the railroad assumes a ghostly pattern, and switch lights gleam through the darkness like myriads of colored fireflies. Unusual night shots may be taken of railroading with little difficulty; switchmen's lanterns bobbing in the gloom, the illuminated windows of a passenger train, the pencil of white light from a locomotive headlight, the bloody glare tossed against night clouds as the firebox door is opened.

While catching the iron horse after dark requires no special technical knowledge, the photographer should be conversant with the fundamentals of night photography. Stationary objects are his best bet; moving lights invariably blur.

Get a locomotive standing in the station or yards or a switchman beside a car. A very effective method when other lights are showing is to "paint out" the superfluous light leaving only the train—surrounded by blackness. I try to have nine parts darkness to one part light in the photo.

The night shot's first cousin, the silhouette, can nowhere be utilized to better

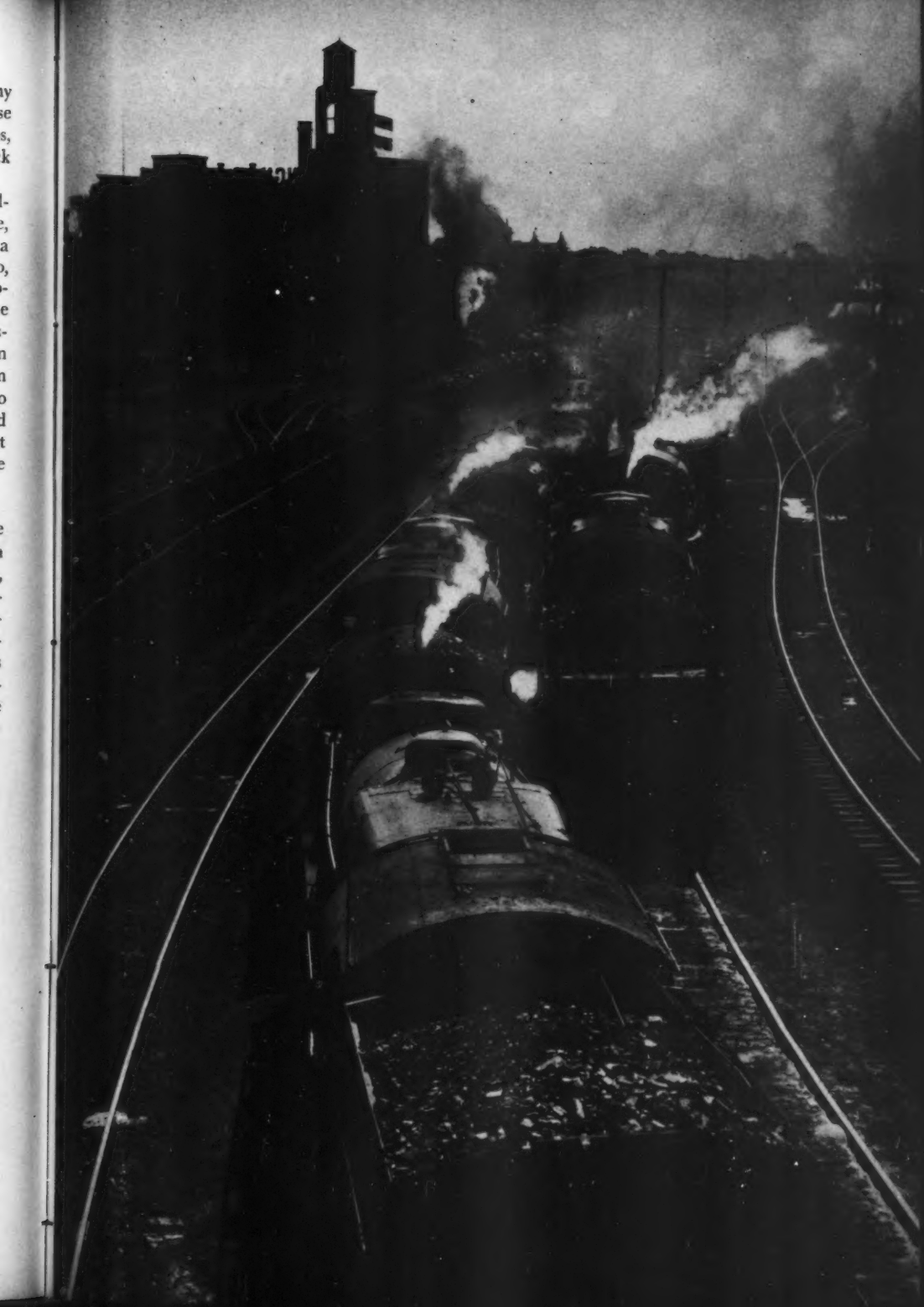
(Continued on page 90)

ENGINE TERMINAL, WEST PHILADELPHIA ➔
BY HAROLD M. LAMBERT

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PHOTOGRAMS

FROM
SMALL
PLANTS



BY WELLINGTON LEE

VIVID photograms, possessing transparent and third-dimensional effects, are a challenge to darkroom ingenuity. Plants, leaves, grasses, and other small objects serve as subject matter, and the only other materials required are contact paper(outdated paper will come in handy for experiments), and a 100-watt lamp in a reflector.

All operations are carried out in the darkroom with the safelight on. First, the contact paper is placed on a table with the emulsion side up and the subject matter is arranged on it for pattern and composition. Then the 100-watt lamp in the reflector is held at a 45-degree angle three feet above the paper. The lamp is turned

on for an exposure of about one-half minute, then moved to one of the other three sides for an exposure of three-quarters of a minute. The exposed paper may be developed in a 1-to-2 dilution of D-72 developer for between 45 seconds and one minute, then fixed, washed and dried.

Moving the lamp will create unique shadows and background effects; the possibilities for startlingly original designs are unlimited. Try holding the lamp in one position, but re-arranging the subject matter between exposures—or even removing part of the subject matter between exposures. Another interesting effect—but wait! Half the fun with photograms lies in pursuing your own experiments.



EARL THEISEN GIVES FIRST AID FOR

Color Problems

MOST of the talk about color photography being *difficult* is misleading. In shooting hundreds of color photographs for *Look* magazine I have learned that color work is easy if the photographer eliminates guesswork and concentrates on two things; exposure and lighting.

The beginner who masters the use of an exposure meter, learns the fundamentals of lighting technique, and keeps a careful record of each exposure for future study, lays a solid foundation for successful color photography. By using his notes as a guide in correcting errors, he will build up a technique which will insure good pictures.

Fancy equipment is not needed for making good color photographs. An exposure meter and a tripod for the camera are essential; other items of equipment such as photofloods, flashguns, and reflectors are the same as those used in black-and-white photography.

The same general shooting techniques explained in this article apply to Ansco Color as well as Kodachrome. This is true also of the exposure charts.

There are two types of Kodachrome, as you probably know, one to be used in daylight and one for indoors or tungsten illumination. Sunlight is much bluer than tungsten light. It is necessary that the color film be balanced with the color of the illumination being used. Filters may be used to correct the light color so that indoor or Type B Kodachrome may be used outdoors, but this is not always satisfactory. There is also a loss of film speed.

Indoor Color Photography—Photoflood

For indoor color work under flood lights I use No. 2 photofloods in ten-inch reflectors near the camera, and a No. 1 photoflood or spotlight for sidelighting. Over the reflectors of the lights *near the camera* I place diffusers of glass-cloth, cheese-cloth, or other colorless material to soften down the light. Undiffused lighting weakens color tones to the extent of destroying certain pastel shades completely.

There is one best way to light for color. The illumination for the exposure is first placed near the camera. This light is flat and soft, but is moved in close enough to give the intensity for the desired stop and depth of focus needed, as well as suitable shutter speed to stop whatever action may be in the picture. In placing the lights, consideration must be given to different levels of illumination necessary to avoid burning out pale colors which require less light than greens, browns, or other dark colors.

Color shots, particularly transparencies, are made to satisfy the requirements for which the picture is needed. A Kodachrome for reproduction must be lighted so there is no excessively contrasting highlight or a falling off in the shadows; pictures for projection or visual inspection are usually better with more brilliant lighting.

In either case, the sidelights for texture and modeling are added after the exposure lights have been arranged. These sidelights are more effective when a hard, undiffused light or spotlight is used. To preserve a close balance between the high-

light and shadows and to provide modeling without destroying color values, it is best to confine the highlights to a smaller area than is ordinarily required in black-and-white photography.

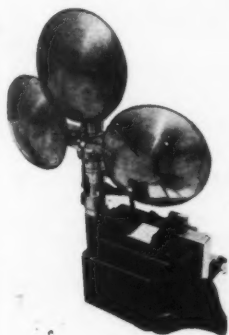
In determining the proper exposure the meter should be held fairly close to the subject matter to avoid a misreading due to scattered or reflected light striking the cell. It is usually safe to rely upon a meter reading taken after the exposure lights are set up near the camera, but before the sidelights are arranged. The sidelights seldom influence the exposure, particularly if they are placed at right angles to the

camera. If the work is being done in a small, light colored room, however, the reflected or scattered light may result in an incorrect meter reading. It is always well to check this possibility by taking a reading both before and after the sidelights are placed. If the sidelights are increasing the reading they should be moved farther around to the side or back of the subject.

No more than three or four No. 2 photofloods can be used on a home circuit without overloading the line because each No. 2 photoflood draws 4.4 amps. If more than two lights are used on a single cord



THEISEN'S SPEED GRAPHIC has numerous additions to facilitate fast action with the camera: his own night focuser, Kodachrome chart, special Heiland permanent mounts for battery, attachment for diffuser and filter on the speed flash reflector, plastic guards covering the electric wire, plus special scales and extending levers on the stops and shutter speeds. At left, the set-up for inside color; three-way reflector provides simultaneous flash of three Press 40's or G. E. 11's, allowing speeds up to 1/400th second on the compur. Below, set up for daylight color. The transparent material over the reflector is blue gelatin laminated between sheets of plastic. While shooting color the filter is pushed down in front of the globe.



or from a single outlet, the resulting drop of voltage will cause the colors to become too warm or yellowish. Most professional photographers who use voltmeters to check voltage fluctuation believe that a drop of two volts is all that can be tolerated without the lights becoming too yellow. No. 2 photofloods give the best light at no less than 110 volts and the best photofloods for color are the ones marked 3200° K. If these are unobtainable the regular ones will do; they may be warmer in color.

While most extension cords are No. 18 wire, a larger wire (perhaps No. 16) is better. Less resistance in the larger wire causes less voltage drop. Extension cords should be plugged into different outlets in different rooms when photographing at home; bad connections or corroded contacts add to resistance and should be replaced. Photofloods that have become blackened should be discarded.

Indoor Color Photography—Speed Flash

Beginners will find speed flash ideal for color photography because it offers less chance for error in exposure and gives more consistent results. The distance from the light to the subject controls the exposure and the proper stops for any given distance are to be found in simple charts.

The open flash method is perhaps the easiest to master. After placing the flash globe near the camera viewpoint, refer to the chart for the proper stop according to the distance between the globe and the subject. Then turn the other lights in the room down low, set the shutter for bulb, flash the globe, and close the shutter. That's all! The open flash is for all practical purposes the exposure specified for the 50th second on the charts. Also, if there is a doubt about the shutter synchronization, depend on the use of open flash, using the same specifications and distance.

In shooting indoors with type B Kodachrome (see the reproduced charts which I have used in making thousands of Kodachromes for *Look* magazine), Wratten filters such as 1-A, 2-A, CC13, or CC 15, must be used. These filters, which do not

G. E. 11 or Press 40—STANDARD REFLECTOR

feet	4	6	8	12	18
1	11	8.0	6.0	4.0	3.0
2	16	11	8.0	5.6	4.5
3	20	13	10	6.8	5.6
6	30	19	14	9.5	7.7
100 sec					
1	8.0	6.3	4.7	3.2	2.3
2	11	8	6.0	4.0	3.0
3	13.5	10	7.7	5.0	4.0
6	19	13.3	10	6.8	5.6
100 sec					
1	5.6	4.5	3.5	2.3	1.8
2	8.0	6.3	4.7	3.2	2.3
3	10	7.7	5.8	3.8	2.8
6	13.5	11	8.0	5.6	4.0
100 sec					
1	4.0	2.8	2.2	1.5	1.2
2	5.6	4.0	3.0	2.0	1.5
3	6.8	5.0	3.8	2.5	1.8
6	10	6.8	5.0	3.2	2.3

THEISEN KODACHROME CHART

HEILAND FOCUSING REFLECTOR
G. E. 5 or Wabash 25
BEAM POSITION

feet	4	6	8	12	18
1	13.2	8.8	6.6	4.4	3.2
2	18.6	12.4	9.3	6.2	4.2
3	22.8	15.0	11.4	7.7	5.2
100 sec					
1	9.3	6.2	4.6	3.2	2.3
2	13.2	8.8	6.6	4.4	3.2
3	16.0	10.6	8.0	5.3	3.8
100 sec					
1	6.6	4.6	3.2	2.3	1.8
2	9.3	6.2	4.6	3.2	2.3
3	11.4	7.7	5.8	3.8	2.8

THEISEN KODACHROME CHART

HEILAND FOCUSING REFLECTOR
G. E. 5 or Wabash 25
FLOOD POSITION

feet	4	6	8	12	18
1	10.2	6.8	5.1	3.2	2.3
2	14.4	9.6	7.2	4.8	3.2
3	17.8	11.8	8.9	5.9	4.0
100 sec					
1	7.2	4.8	3.2	2.3	1.8
2	10.2	6.8	5.1	3.2	2.3
3	12.5	8.3	6.2	4.2	3.0
100 sec					
1	5.1	3.2	2.3	1.8	1.5
2	7.2	4.8	3.2	2.3	1.8
3	8.9	5.9	4.4	3.0	2.3

THEISEN KODACHROME CHART

THESE EXPOSURE CHARTS for inside color may be clipped, mounted, lacquered and attached to your own camera. A metal clip such as the one on Theisen's camera, page 33, should hold all three. Some photographers may wish to give a half stop more exposure when using the G. E. 11 globe in top chart.

change the exposure, are necessary because the light from the speedflash is too bluish for type B Kodachrome and must be warmed up with a straw colored filter. The color of flash is half way between daylight and Type B; filters are only used to rectify color of light from the flash.

Color temperature is the technical way that the color of light is measured. The unit of measure, so to speak, is called degrees Kelvin. Noon sun at Washington is 5500°K. and daylight Kodachrome is balanced for that. Flash globes burn at 3600 to 4000°K. depending on the size of the globe. Regular photofloods burn at 3425°K. and special photofloods for color burn at 3200°K. Although inside color is balanced for 3200°K. a difference of 200°K. is within the permissible limits for good color. The raise in color temperature has a tendency to make all colors warmer. Type A (35mm.) Kodachrome, because it is mostly used for projection, is made blue and more brilliant and is balanced at a higher Kelvin. So always use a filter with *flash indoors* but not with flood lighting or outdoor color material.

While only one light source is necessary, two lights are vastly superior in that they permit greater flexibility for interesting pictures. Many professional photographers first light their settings with flood bulbs which are replaced with flash globes for exposure. One or more globes are used at the camera, depending on the distance; and the second light source, arranged at right angles to the camera, is fired simultaneously by plugging into the battery case. The remote light (or side-light) must be about the same distance from the subject as the exposure light so as not to burn out the highlights. In computing the proper exposure, only the lights to be fired from the camera viewpoint are considered; the remote lights are ignored.

It is imperative that no more than 20 feet of extension cord be used with a three-cell battery, and that cords used for flash are not used for high voltage currents. A 110 volt current will cause enough corrosion on the contacts and oxidation in the copper strands of a flash cord to destroy synchronization.

Outdoor Color Photography Sunlight and Reflectors

Color photography in sunlight presents few problems other than filling in shadow areas with light. Bright aluminum foil on cardboard or plywood makes intense reflectors, while white or aluminum paint produces a softer light.

Reflectors are important only where the subjects are closeup or large in the picture and are seldom needed at 15 or more feet. On hazy days, or when the light is soft, no fill-in light is required. It is not always true, however, that haze makes sunlight bluish. Color shots taken when there is moisture haze in the air may have an overall bluish cast and a haze filter may be used, but if the haze is due to smoke or dust in the air, the light tends to be yellowish.

The sun is in the best position for color photography around 10 o'clock in the morning and 2 o'clock in the afternoon. At these hours the shadows are at their best and are most easily controlled. When the sun is directly overhead, the shadow patterns usually distort a subject's face with what appear to be unsightly holes beneath his eyes.

If shadows are too dense in relation to highlights, the color in the shadow areas may not register at all. Reflectors have the disadvantages of being slow and causing most subjects to squint their eyes. When used, however, they should be hot enough so that a meter reading indicates a drop of less than a stop between the highlights and shadow areas. In other words a Weston reading of 200 on the highlight side should have enough reflected light in the shadows to get a reading of approximately 150 for the shadow side.

Under normal atmospheric conditions sunlight becomes warmer later in the day. When the sun is between 15° to 30° above the horizon, Type B Kodachrome may be used to obtain near facsimiles of sunsets. In this position the sun's red rays will be somewhat weakened but the richness of the blues will more than compensate in a very effective picture.

Outdoor Color Photography Synchro-flash and Sunlight

Synchro-flash offers a quick, easy way of throwing light into shadow areas. My standard of shooting synchro-sunlight (see chart) is 1/50th of a second at 6 feet with a Weston of 800, using a Press 40 covered with a blue gelatin filter. From this basic standard I vary the distance of my globe from the subject to meet the varying intensities of the sunlight. When shooting over 8 feet, however, blue globes lack sufficient intensity and clear globes are preferable. (*Hold everything. G. E. is coming out with an improvement on blue globes, 5B and 21 B, which will be faster. Exposure for these will be about the same as Theisen uses in his gelatin filter system. See "New Products," page 84.—Ed.*)

Outdoor Color Chart

Distance of globe from subject for synchro-sunlight.

Using correct exposure in stops and shutter speed indicated by Weston meter this table will approximate average result. Use 5-B (blue) globes for closer distances. In other words, the highlights should be no more than one stop brighter than shadows.

Weston	Feet
1600	4.2
800	6
600	7
400	8.4
200	12

If the Weston is:

800

If the shadows are:

400: add no flash for ordinary results

200: add flash equal to 1 stop in shadow areas

100: add very intense flash or reflected light.

THE COPA CLUB at the Beverly-Wilshire Hotel has provided the backdrop for many a Hollywood pin-up. Here Earl Theisen prepares to shoot the color picture on opposite page, surrounded by two RKO stillmen, a hair stylist and the wardrobe mistress. Below, Theisen has just made one of his periodic light readings and has stepped back to calculate the exposure.

Photos by George R. Hoxie.





THE ARMY PIN-UP GIRL — MARJORIE STEWART

For closeups, either the blue globe or a clear globe covered with blue-color gelatin should be used. (If a blue gelatin bag is used over the globe it must be sky blue in color. I would suspect blue cellophane because most of it is too green.) The flash intensity is controlled by the distance of the flash to the subject, and as the sun intensity increases, the flash is moved closer

to the subject to cut down the contrast range between highlights and shadows.

If the camera must be operated at a fixed distance from the subject, the flash can be moved in by means of an extension cord. Usually, I find that I can operate my flash affixed to the camera if the sun ranges between 200 and 600 Weston, and the distance between the

THEISEN needed plenty of light, three globes at the camera plus extensions, to get this picture of Katherine Dunham, the dancer. His photograph opposite, of Rita Hayworth, is unusual in concept and notable for its pleasant color harmony. Less of Miss Hayworth we've never seen!





camera and the subject does not exceed 6 to 9 feet.

For shots of this sort I use a Press 40 or a G. E. 11 with a blue gelatin filter over the globe. When the new G. E. No. 5-B globes or Wabash 25s are used in a Heiland focusing reflector, the reflector should be beamed out to about $\frac{1}{3}$ position to approximate this same technique. When the Weston reading is 200 or less, Wabash 2-B globes have a tendency to wash out shadows at a distance of 6 feet.

Variances In Color Photography

Colors do not always photograph the way they look. Greens have a tendency to lose their brilliancy and go dark, sometimes brownish. Pinks, pale blue, and pastel colors usually weaken in color photography unless the illumination discriminates in their favor. More vital colors

such as red, blue and deep yellows should be used when striking effects are desired.

Since all dark colors seem lifeless when photographed near a brighter color, one or the other must suffer because of the necessary compromise in exposure. Dark clothing, for instance, will mean either a sacrifice of the color and texture qualities of the clothes, or the skin tones of the person wearing them. Where dark clothes are necessary, a light colored setting somewhat satisfies the visual impression. It is generally best to ignore the dark clothing and expose for the face because the face is the most interesting part of the picture. Of course if the picture is a long shot, the clothes and setting assume more importance and the exposure should be judged accordingly.

While most shutters are accurate, a few vary from their given markings by as



DEANNA DURBIN. Theisen and camera, a shutter speed of 395th of a second, blue globes and plenty of champagne combined to make this color action shot.

much as a full stop. Therefore if color in pictures is persistently too light or too dark, a little sleuthing with the exposure meter and data records may prove that a shutter is erratic in its action due to dirt, or to temperature changes which make it sluggish in winter and too fast in summer.

Make-up for Color Photography

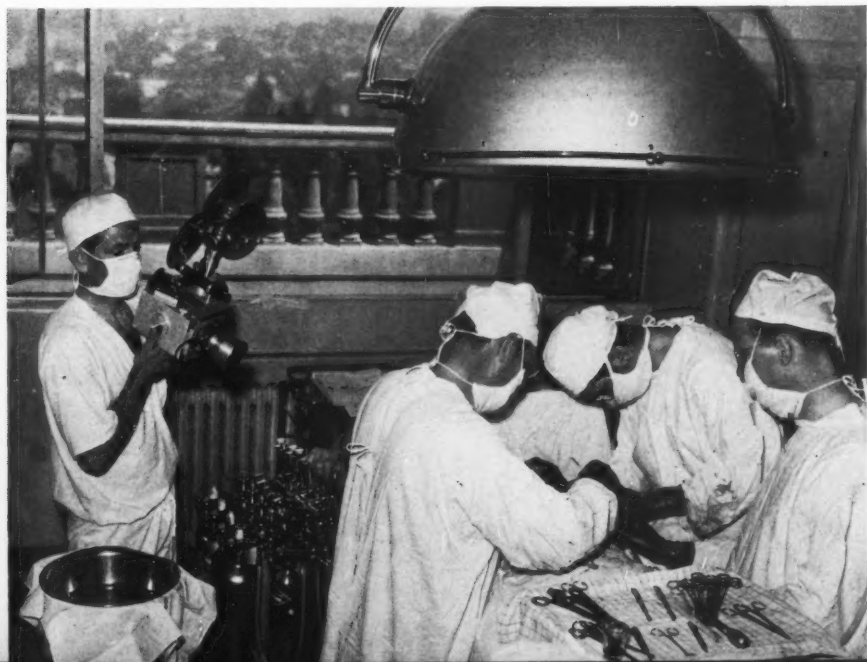
Makeup, though of somewhat minor importance in color photography, deserves consideration. There are several foundation makeups, such as Max Factor's, which are easily applied with sponge and water and over which a coat of powder is dusted. But the first rule for makeup is to apply it sparingly. Naturalness is the thing desired.

Very little cheek rouge should be used and no eye shadow. The eyebrows should not be changed in shape or pencilled in too darkly. Lip rouge should follow the natural curve of the lips; departure from the natural shape is likely to show in color

photography. Ordinary street makeup will do for models who possess clear, photogenic skin. Lip and cheek rouge of a faint orange hue is preferable for both blondes and brunettes. Suntan colors are best avoided. For beach photography, oil provides interesting picture possibilities.

Most of the fun in color photography comes from satisfying personal preferences. Some photographers like deep shadows and contrasty color pictures, others prefer the somewhat harsh but flat tonal range resulting from pictures taken with the sun at their back. The hope of all photographers should be to create a third dimensional or plastic effect in a two-dimensional picture. To this end it must be remembered that all-over definition and exposure for color is more critical than for black-and-white work. Color gives the cameraman an additional means of self-expression to broaden his horizons. Color may be a mantle for his creative skill in either diffusing reality or enhancing it.

THEISEN uses a Curtis Color Scout in the operating room. Color here may be difficult because there is often a mixture of daylight and tungsten illumination. The white gowns and sterile requirements of not going near the operation are handicaps. Critical color details must be in sharp focus and this depth of focus is important in all color shooting. Out of focus back images in color are more distracting than in black and white; it's best to avoid highly colored backgrounds if sufficient depth of focus is impossible.



Free Lance Photographer

MRS. IDA GREENBERG'S LITTLE BOY SYDNEY GOES TO CHINA

CHINESE TRAINING AND COMBAT COMMAND, U. S. ARMY

I WAS only 22, and made my living as a free-lance photographer selling pix to the New York *Journal-American*, *Mirror*, and to *Look* and *Peek*, and ran a little photo syndicate of my own from Brooklyn called "World Photo." That was a couple of million years ago, but I wish it were tomorrow.

I volunteered as a combat photographer and arrived in India in February, 1944, soon after basic training, and was assigned to a military mission then known as Y-Force Operations Staff.

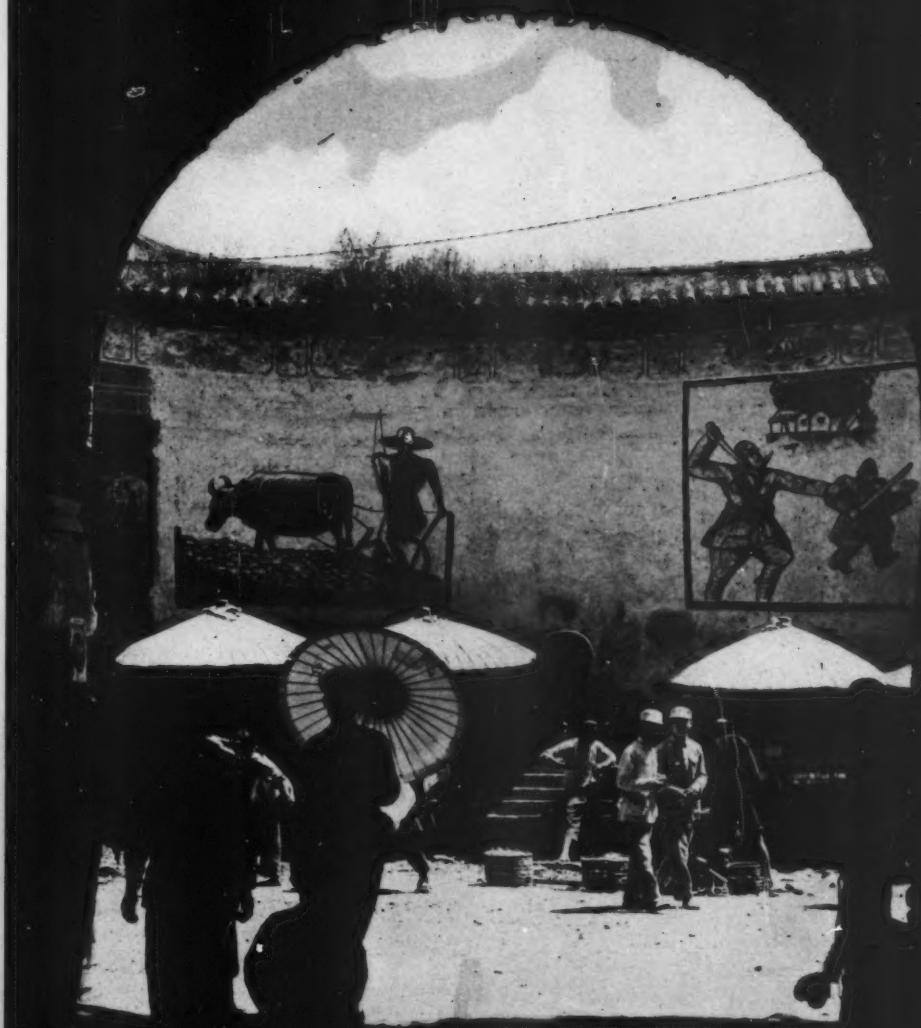
Y-Force trained, equipped and supplied the Chinese Expeditionary Force, and

(Text continued on page 104)

THE OLD AND THE NEW team up to keep the Burma Road in repair as tons of supplies go over it hourly, night and day. Here, Chinese laborers work slowly and patiently to build a stone surface on the road, fitting each rock by

hand. Five hundred miles away bulldozers, rock crushers, and all the marvels of American engineering ingenuity, are doing the same thing, faster, mechanically, better. Where the two civilizations meet, new China rises.





CHINESE WAR POSTERS INSIDE THE WALL OF THE CITY, PAOSHAN



CHINESE MOTHER AND CHILD, SHUNNING BLACKSMITH SHOP AT PAOSHAN
LUNCHEON, CHINESE STYLE, WITH CHOPSTICKS, AT SHUNNING





CHINESE PAGODA, AT THE WEST POINT OF CHINA, NEAR TALI

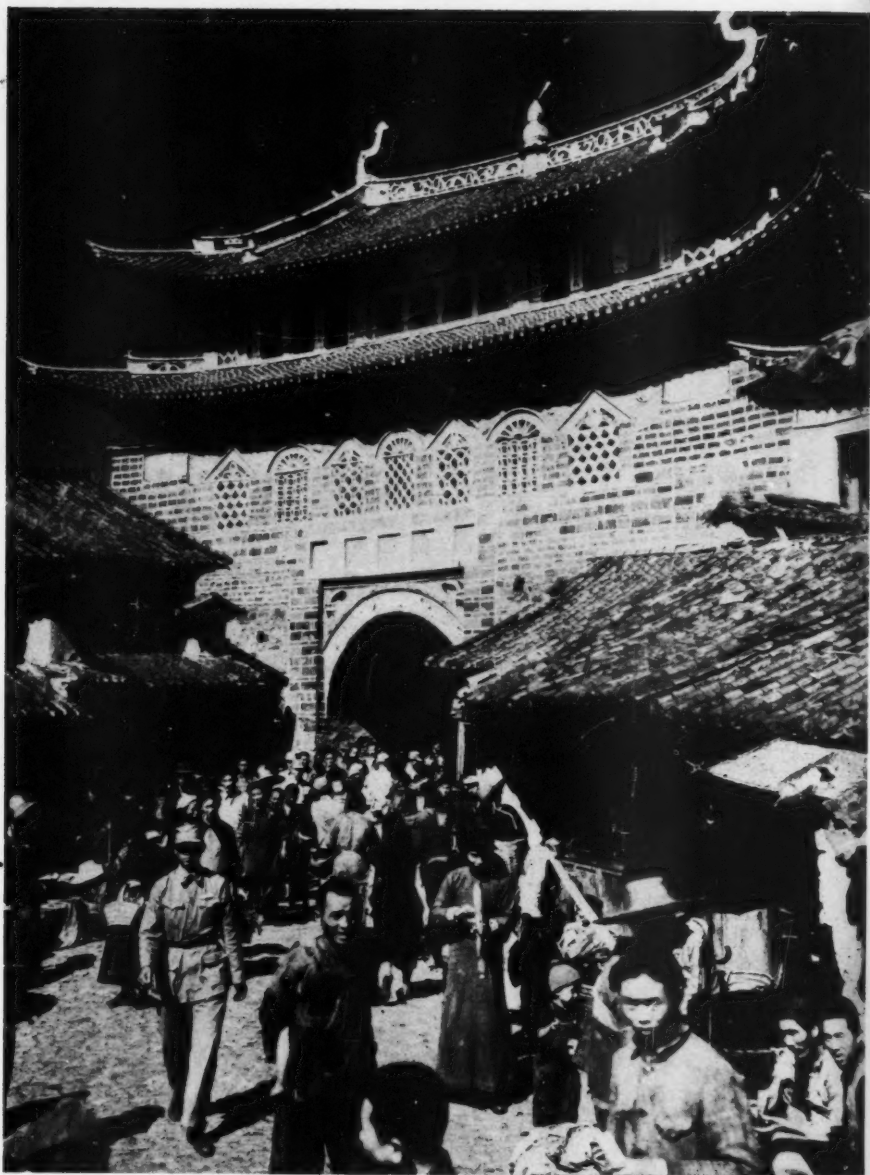
A RED FILTER turned the brightly sunlit sky dark, and added a touch of photographic drama to the white pagoda, and an oil painting quality to the tree. Note how the addition of the soldier in the lower right-hand corner gives a little more meaning to the scene. F.8, 1/100.



ALONG THE BURMA ROAD IS CHINA'S ANCIENT CITY HSIAKWAN

THROUGH DESOLATE wastes and thousand-year-old cities, the Burma Road brings American men, food and supplies to China. On picture, opposite page, the rocky gorges and the speeding mountain stream are typical Burma Road terrain. That castle, on top of the miniature plateau, was once commanded by a piratical feudal Chinese lord who taxed caravans on the basis of the style to which he was accustomed to living.





ALONG THE BURMA ROAD IS CHINA'S ANCIENT CITY HSIAKWAN

THROUGH DESOLATE wastes and thousand-year-old cities, the Burma Road brings American men, food and supplies to China. On picture, opposite page, the rocky gorges and the speeding mountain stream are typical Burma Road terrain. That castle, on top of the miniature plateau, was once commanded by a piratical feudal Chinese lord who taxed caravans on the basis of the style to which he was accustomed to living.



Characters are a cinch

HARVEY W. BROWN, A.P.S.A.

A GENTLEMAN from MINICAM by the name of Hoxie was kidding me. Or was he?

He came into my place one day when we were in the midst of what I supposed was about the most interesting thing that could be done in photography. We were shooting one of the most beautiful and shapely of the rising young movie starlets.

He was interested, I must admit, for a time, but then his eyes began to wander. He was gazing at the pictures on the walls and I soon saw that he was concentrating on the saintly old codgers with the flowing beards, and the strange assortment of other odd characters that were hung about the place.

He looked at this one and that one; he stroked his chin where his beard should have been; he hummed and he hawed. I was getting ready for some wonderful compliments. I was beginning to feel good all over. But this is what finally came out:

"You know," he said, sort of slow, "If I had all these freaks around me that you've got, I'd snap a few good pictures and make myself a reputation."

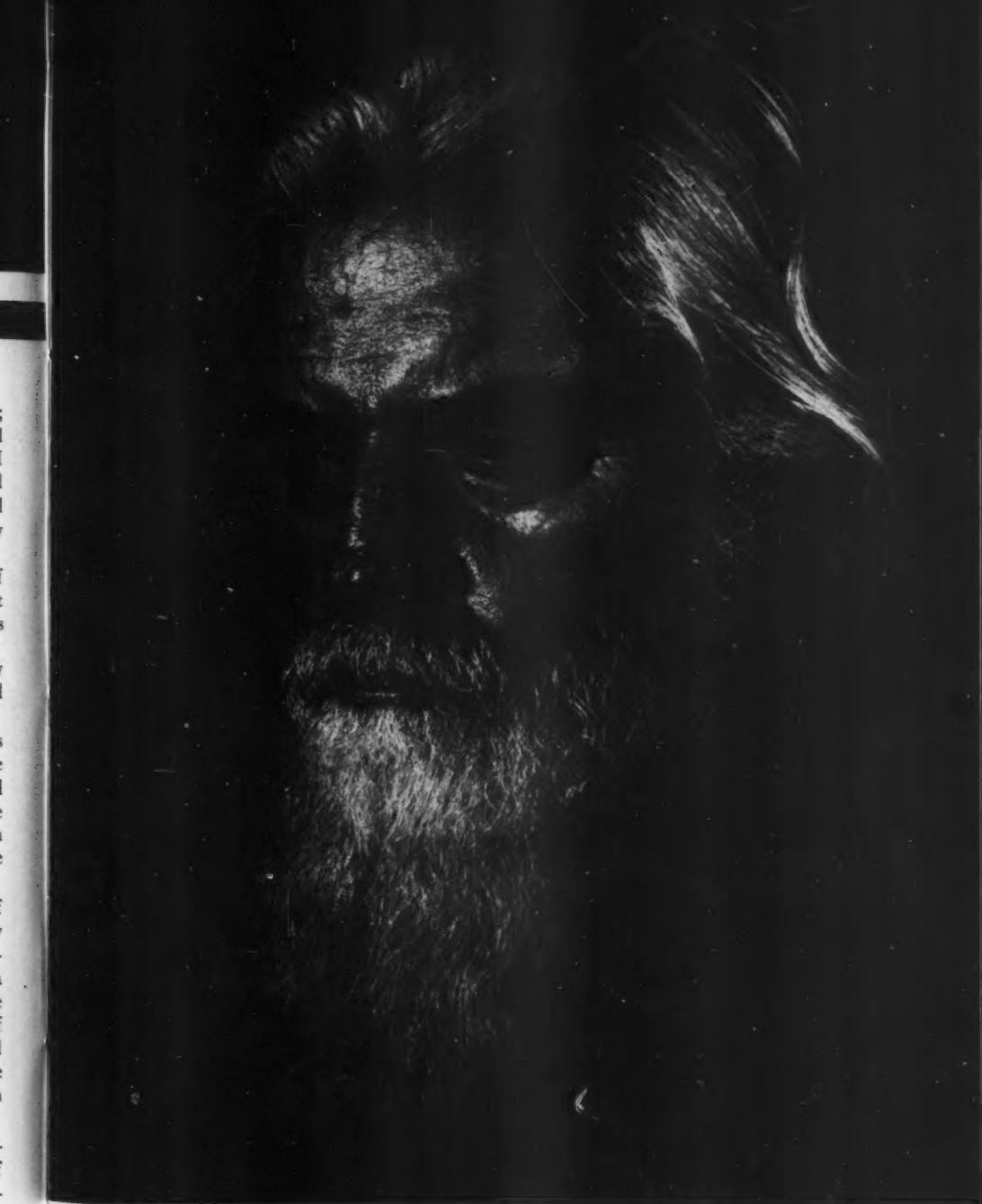
What could I say to that? My only response was a couple of dirty glances and a few grunts. But he went right on.

"I understand all you've got to do is stick your head out the door and whistle and they come running." Then he heaped insult on injury. "They tell me these characters just sit right down and all you have to do is shut your eyes and snap the shutter."

At first, after listening to that sort of talk, I felt I had every right to get very angry. But after thinking it over, it occurred to me there might be more than a little truth in what he said. For, strange as it may sound, within a half block of where I teach photography to advanced amateurs, you can find, I believe, more odd characters to the square foot than in any other spot on earth.

And, what may sound more unbelievable, this spot is in the very heart of downtown Los Angeles. This is in Pershing Square, famed landmark, known from one end of the country to the other, and a must for every visitor to Southern California. It is a park covering a city block,





OLD MAN BATES

HARVEY W. BROWN, A.P.S.A.

BROWN is a little undecided about which interpretation of Bates is the better.



Photo by Doris Nelson

BY THE FOUNTAIN, some Pershing Square regulars—Kaptain Kidd and Mike the Fiddler put on their daily entertainment. The real character in rear, wide black hat, boots, etc., is the best of all; a new one that just stepped into the picture to see what was going on. First time I ever saw him and as you can see he is a good prospect. The picture below is just a record shot of Annie and Mike the Fiddler made for study before attempting the more serious picture opposite.



surrounded and overshadowed by some of the largest and most prominent buildings in all Los Angeles.

Sidewalks lead in from each corner and two sides to a large center area with a fountain set squarely in the middle. These walks are lined with wooden benches. They are usually crowded from morning until night with people just watching and waiting, reading and doing nothing and everything. The park, itself, is beautiful, with tall palms, and green grass, and the usual abundant California flowers and shrubbery.

There is a statue of the great composer Beethoven there. Birds come to rest on it, doves of peace from lofts on the nearby buildings. Crowds mill around the fountain, gathering in small bunches for big talk. They shake their fists and shout at each other and threaten criminal assault and assorted mayhem. Nobody pays any attention to this. There is never any blood spilled.

But if you think you are a good debater, just pick your best subject and step into one of those crowds. All you need do is to clear your throat. Someone will step up and give you the most eloquent argument on any subject from California weather to the sanctity of the Four Freedoms. He may have patches on the seat of his pants, or be one of these characters running around in his bare feet, but you had better be good or you'll get the Pershing Square cheer which is ten times as derisive as the Bronx variety.

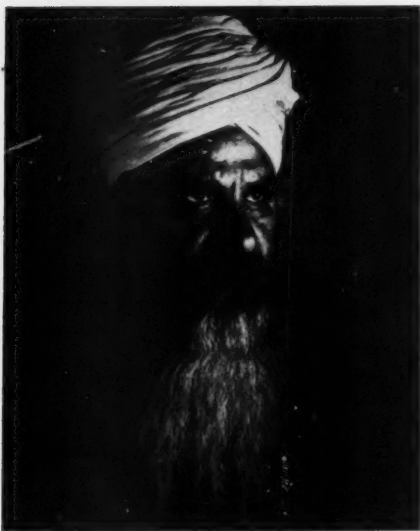
If you choose religion or how to live to be seventy-five years old, it might be Mike the Fiddler himself, who challenges you. Now there is as rich and rare a character as ever hit Pershing Square or tramped the streets of movieland. You see him everywhere in his tall silk hat, with his flowing beard, and his violin case under his arm. He often wears a long coat and a plaid shirt and checkered pants. Two pair of glasses with prominent rims are hooked on his nose. He wears a heavy pair of army shoes many sizes too large.

He opens his mouth showing his teeth.



VIRTUOSO

HARVEY W. BROWN, A.P.S.A.



SURAT SING



ALASKA JAKE

"You see these?" he says, and he sticks his finger in his mouth, pointing right at them, "I'm seventy-five and I've got every one of them. They are sound as a dollar; not a filling in any of them. And do you know how I keep them?" he asks. "Well, I scrub them every day in gasoline." He pulls a bottle of gasoline and a tooth brush out of his pocket to show you he's not spoofing.

You are fortunate if you happen to be there on Annie's day on the Square. Annie is versatile; she is a dancer, a musician, an actress, the world's greatest. The last time I saw her she was both a dancer and an actress and she sang a song and cut a rug to prove it to me. I have her over to the studio to take pictures. She laments the fact that I have no piano so she can play me a concert; she played a concert at the Biltmore last night she says. And she has just finished in a picture. They say Annie was an actress twenty-five years ago, but now—well, she's just another character in Pershing Square.

I think I saw old man Bates the first day he came into Pershing Square. He was a kindly looking old soul as he sat on one of the benches smoking his corn

cob pipe. His old wide brimmed straw hat was dirty and torn, and his clothes needed cleaning. A canvas bag lay at his feet.

He told me that he had just come from Denver; that he had been out with a circus; that he ran around the ring with the clowns and sometimes took care of the performers children; that he didn't like it here with all these funny people around him.

There is another one I call Alaska Jake. He, too, has a long beard, and he wears a fur cap and a plaid mackinaw. But that isn't all; like Sam McGee from Tennessee he has on three shirts and two pair of pants. He sits there on his bench looking as cool as a cucumber on the hottest day. You ask him if he isn't hot and he laughs up at you, with his jagged teeth showing, and pounds his chest in glee.

"No—No—!" he says. "These work just like a refrigerator," and he pulls open his mackinaw and shows you his shirts. "It's the only way to keep cool. These here keep the heat out and the cool in."

On many days you see seven-foot Surat Sing, an East Indian, with his long beard and turbaned head, standing alone by the fountain, looking out over the crowd. The



SUPPLICANT



MENACE

pencil peddler has one leg off and uses crutches. He has long hair and a scraggly beard. You are struck by the wistful look on his face which reminds you of so many pictures you see of Jesus and the crucifix.

There is Kaptain Kidd, too. He struts around like a pirate of old; red bandanna on his head, pants cut off just below the knees, and beautiful gold or silver sandals on his feet. He tells you that he just ran a twenty-six mile marathon on his seventy-first birthday, and he pulls out the clippings and his picture from the paper to prove it.

Yes, Pershing Square is a happy hunting ground, a paradise, for anyone who wants to photograph characters. I have told about a few; there are others, and new ones show up all the time. Just walk through the Square and pick them out of the crowd. You never have to have special costumes. The get-ups most of them wear, shame your own puny imagination. You just take them as they come. Some of the pictures give you a sad feeling, and a lump in the throat. From others you get a belly laugh. They all seem to be desolate bits of humanity, coming from nowhere, and going nowhere.

I am often asked how I get them to pose, what approach I use. At first, I just walked up and gave them my card and asked them if they wanted to make a few dollars. That seldom failed. Later the word got around that a nut up in the next block paid money just to take a picture, so many of them now come looking for me. They think I'm the queer one.

But it pays to be careful in your approach. Recently a prominent visiting pictorialist left my studio with the avowed purpose of finding himself a character on Pershing Square and making the character picture to end all character pictures.

A few moments later he came rushing back with cold sweat on his brow and a harrowing story. Sure enough, he found a character, a saintly old gentleman of about ninety with a long flowing mane and a magnificent beard. He explained what he wanted. The old man at first seemed agreeable enough so he urged him to come, right now, over to the studio.

Then it was that the old gentleman rose up on his wobbly legs like an embattled prophet and began lashing out with his cane and shouting, "I know what you

(Continued on page 88)



By Bob Kreider

JOHNNY is in the paratroopers and you are doggone proud of him. In fact, for the past few days you've been exhibiting a new snapshot to his friends. So many people have asked for his picture—well, let's give them a treat and make some photographic match packs. We'll send some to Johnny (along with some of his best girl) and give the rest to his friends. Is that a deal?

Incidentally, once you have made Johnny's match pack, you will find an inexhaustible supply of subjects. Home, pets, the gang, can also be portrayed on

your match covers. For out-of-town friends who come to visit, there will be a set composed of familiar landmarks about your town.

Photographic match packs can be made either by enlarging or by contact printing. Choice of the printing paper is up to the individual, but double-weight paper should be used. (I prefer semi-matte such as Kodabromide G.)

As most of my negatives are miniature, I prefer making match pack covers by enlargement. This permits cropping the

photograph to the necessary size without copy negatives.

If the image on the negative you propose to use is too large or small, and you prefer contact printing, you can make an enlargement and copy it to the required size on film. The copy negative is made like any other copy, using two No. 2 photofloods at 45-degree angles to your picture. A lens setting of $f/8$ and $1/25$ of a second is the approximate exposure for Superpan Press or Super-XX film. When using D-72 for paper developing, I dilute one part of developer with two parts of water and develop for $1\frac{1}{2}$ to 2 minutes at 70 degrees.

An 8x10 sheet may be cut to produce ten match pack covers $1\frac{1}{2} \times 4\frac{1}{2}$ inches. Masking your easel or contact printer to $1\frac{1}{2} \times 2$ inches, allows space for a picture,

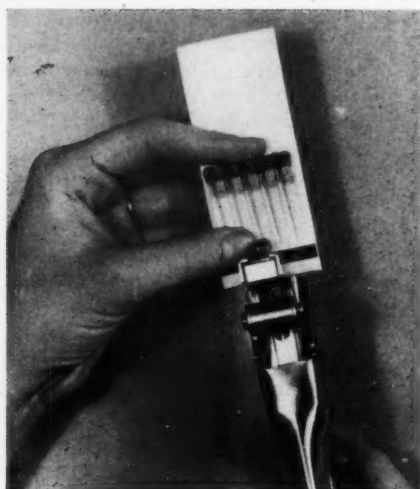
without a border, on the front of the match pack. For my own convenience, I devised a simple easel which saves time while printing. (See illustration). It can be made from a cigar box or from pieces of stiff cardboard.

After developing, fixing and washing in the usual manner, immersing the prints in a glycerin or Flexogloss solution, for at least five minutes, will soften the emulsion and prevent cracking when you fold the cover into shape.

Toning often adds to the attractiveness of the finished product. Photos of those in the Army are often aided by sepia toning. Gold tone is also fine for portraits. Different toners may be used for other subjects, such as blue for snow, marine or night scenes; green for landscapes; or magenta for dramatic shots. When the print is dry, the striking surface is applied.



EASEL for making photographic match pack covers was made from heavy cardboard.



MATCH BLANKS are stapled into sensitized paper cover, after striking surface is applied.



COMPLETED photographic match packs can be as distinctive as your imagination permits.

The following formula may be used, and I might add that a bit of experimentation may be required to produce the right "body." The mixture can be applied with a brush and to speed up the procedure, a small frame for holding the match pack cover may be made from a cigar box.

Red Phosphorus (paste)	49.5%
Gum Arabic	20.9%
Gum Tragacanth8%
Antimony Sulphide	27.6%
Emory (very fine)	1.2%

As there may be some difficulty in securing these chemicals at the present time or you may not care to go to the trouble, the striking surface from the cover of an ordinary pack of matches may be used. After removing the staples, trim the striking surface from the match cover on your trimming board, and then peel the cardboard from the back of the strip. This striking surface may be applied to your own match pack cover, at the opposite end from the picture, with rubber cement, tire patching cement or a good vegetable paste.

Now fold the striking surface end over the bottom of the matches and staple the two together. Holding this end firmly in your hand, fold over the top of the

pack, creasing it at the top of the photo. This completes your first match pack—but it won't be your last one!

Blank matches (without covers or striking surfaces) can be purchased for 35c per 25 packs from the Piedmont Press, 749 S. Plymouth Avenue, Rochester 8, New York. This concern will also supply complete book matches in boxes of 50 for \$1.00, postpaid.

If you use the striking surfaces from ordinary match packs, you can utilize the matches from the discarded packs and no further expense will be incurred.

Besides being a novel presentation of Johnny in his uniform, photographic match packs have other useful merits, which you will want to remember when wartime shortages are a thing of the past. They provide excellent gifts for weddings, birthdays, Christmas, and prizes for your wife's bridge club. At a party, novelty match pack place cards bearing each guest's likeness will add prestige to you as host. *Caution note:* the Post Office has special rules for mailing match packs.

The next time your best friend ambles up to you and says "Got a match?" hand him a surprise—give him a match pack with HIS portrait on it.

A KODAK EKTAR LENS



as you usually see it

...and as it looks before assembly

Illustrated—principal
parts of Kodak Ektar
f/1.9, 50 mm.

A FINE Kodak lens is glass and metal, like any other lens. But more important, it's men, minds, and machines. It's years upon years of experience in optical science and craftsmanship . . . ingenious tools and instruments . . . fingers that through long practice have developed a touch of genius. Only this combination could turn out the Kodak Ektars thus far produced. Obviously you can count on the same Kodak "lens wisdom" to give you the very finest in postwar photographic objectives.

How a Kodak Ektar "goes together"

THE glass elements that work in pairs are "welded" together with special cements, and positioned in their supports within minute tolerances. Retaining rings . . . diaphragm blades and their disklike tension springs . . . these and other parts are applied with utmost care.

Each sub-assembly is tested; every element added calls for retesting. Enlarged projected images permit precise checking of diaphragm openings. The focusing arrangement is tested throughout its entire range. Total end play in all moving parts must be within 5/10,000 inch.

Then the Ektar goes to the lens bench microscope for final tests . . . for checking against every optical criterion set for it . . . until that particular Kodak lens proves itself *in practice* as great as it is in conception.

**Kodak**



KODAK research has indeed made color photography a part of everyone's life—Kodachrome transparencies magnificent as the one reproduced above . . . Kodak Minicolor Prints . . . the still new and very exciting Kodacolor snapshots . . . Kotavachrome Prints . . . and Kodachrome movies in both 8mm. and 16mm.

And Kodak's "color men" are still working on color . . . expect to be working on it indefinitely. For at

Kodak, color isn't just film or paper. It's more than a product, or a process. It's a program, a continuing and ever-progressing plan on which you can rely to the fullest extent for color at its very finest. Eastman Kodak Company, Rochester 4, N. Y.

• • •

Film is still very scarce—the war takes so much—but there's a little to be had every now and then; so it pays to keep asking . . . at your dealer's.

- Kodachrome transparencies
- Kodak Minicolor Prints

5 ways to Color with Kodak

- Kodacolor snapshots
- Kotavachrome Prints
- Kodachrome movies

Kodak

MAKE PHOTOSTATS AT HOME

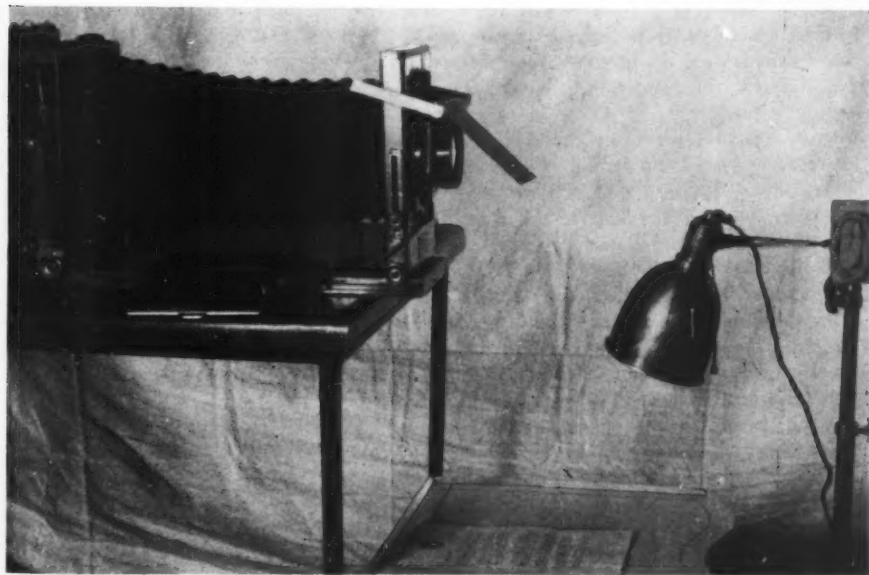
MARTIN VOS

WE all know what a photostat is. That's what we get when we ask the Bureau of Vital Statistics for a copy of our birth certificate. And we usually have photostats made when we want a letter or document copied. Actually, the proper name for such prints is photocopy or photoprint. Why are they called photostats? The Photostat Corporation introduced the first photocopying camera and named it Photostat. Now a competitor, the Haloid Company, makes a photocopying camera and they call it the Rectigraph, so it would be just as proper to call these prints rectigraphs. But whatever these prints are called, photocopy, photo-

print, or rectigraph, they are all made without the use of film.

The principle used in making photostats can be adapted readily for home use and it's a lot of fun. To better understand how, let's go into a very brief explanation of the workings of a photocopying camera. The largest made commercial machine is an 18x24-inch model. It costs \$1,200 and consists of a large camera bellows with a lens and optical prism in front. Below the prism is a copyboard that rises and falls for focusing. On this board is placed the material to be copied. At the back of the bellows is the magazine. This holds a roll of photographic paper, some-

HOME SET-UP for making photostats includes camera with cheap chromium pocket mirror attached in front of lens at 45° angle. Portrait attachments permit close-ups with cameras otherwise unsuitable for this purpose. Here a letter is about to be copied, onto a paper negative.



what similar to the manner in which roll film fits into small cameras. After the exposure is made onto the portion of paper that is behind the lens, this exposed section of paper is wound down into a tank that holds developer, and then, by a lever that operates a knife assembly, it is cut off from the large roll of paper. After the print is fully developed, a handle winds it out of the developer into a tray of hypo fixing solution. The print is completed by washing and drying after proper fixing.

The result is a print as shown in the illustration of the V-mail letter. It is negative in color, but the reading matter is not reversed, or backwards, as would be the case if no prism were employed. The purpose of the prism is to reflect the image into the lens, reversing it so you get correct reading negatives.

What is there to stop the amateur at home from making prints in a similar fashion? Certainly he can substitute paper for film for many pictures, especially in reproducing documents or letters. Many of the letters we are getting from boys in the service we would like to send on to our friends, but we do not want to part with the original letters, and copying by hand is too laborious. Why not make photocopies?

Here we borrow from the large commercial cameras and do it in a simple way. In place of the expensive optical prism we substitute a small chromium-plated mirror, such as you get in shaving kits that are currently sold for men in the service. The mirror should be placed at a 45° angle in front of the lens to do a good job of reflecting and reversing the image. The illustration of the home set-up shows the manner in which it is done.

In the filmholder we place the film substitute. This should be a fast and contrasty sheet of enlarging paper, if the subject is a letter, printed matter, or line drawing. On this sheet of paper will be the finished print after it has been exposed, developed, fixed, washed and dried. Thus is eliminated the expense as well as the time required to process the film.

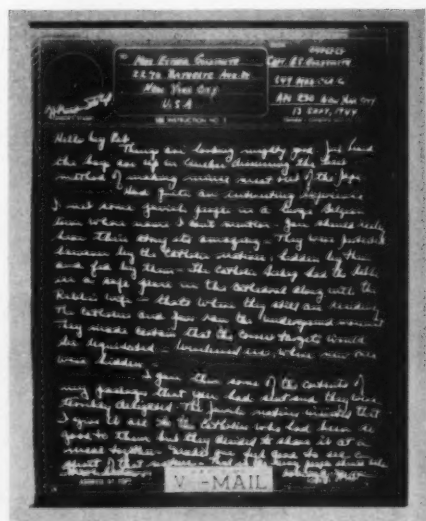
Should you want an especially contrasty

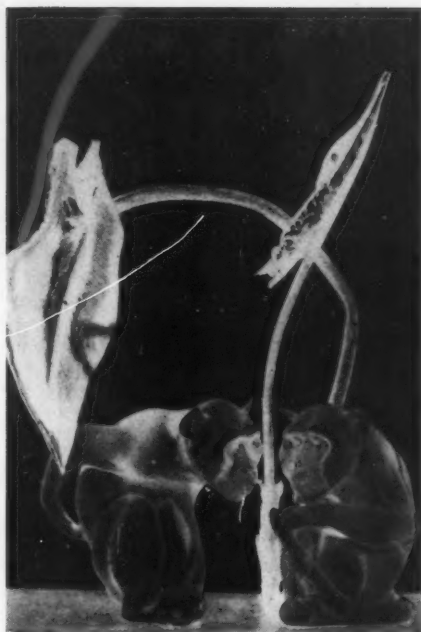
print on a paper that can be folded without cracking, you might get Eastman Ad-type, Ansco Nokoline, or Haloid Record B paper. It is supplied in cut sheets. A filter often helps separate colors, making it possible to reproduce in black and white, material which was originally printed on yellow, green, pink or blue paper.

By applying the photostating principle, it is possible to omit the use of film when making numerous types of photographs. If you want to copy a photograph, or make a picture of a still life or table-top set up, the exposure can be made right on the sensitized paper placed in the film holder in the place of film.

When making pictures in which good half-tones are desired, it is important to use a normal contrast grade of fast enlarging paper, or the negative will be too contrasty. For this purpose the negative should be somewhat low in contrast. It can even be a bit on the flat side and it should not be too dense. The finished negative should have about the same color or density values as a normal film negative viewed by transmitted light. Remember, the values as seen by transmitted light,

A PHOTOSTAT of a letter from your serviceman permits copies to be sent to relatives, while the original letter remains at home.





PAPER NEGATIVE made directly through camera, and positive print made by copying paper negative in same manner.

not the density as it appears when a film is laid on a white sheet of paper and inspected by reflected light. Films viewed in this manner look quite dark and even choked or blocked in the highlights. On paper, a negative with such density would be worthless. These paper negatives have a definite advantage over film in the matter of retouching, for pencil takes readily on the paper surface.

Now, the finished print from these negatives is not made by printing through the negative as is the case with the film negative. The paper negative is set up in front of the camera and photographed right onto another piece of enlarging paper that has been loaded into a film holder. And you can make prints within a very short time after making the paper negative, because it can be processed and dried more quickly than film. It is even possible to force the drying without fear of reticulation, which is one of the risks when forcing film to dry. Prints from these negatives can be made as small as you want, or as large as the largest camera you own.

The negative illustrated is one that was made directly on the paper through the camera, on a sheet of normal Halobrome enlarging paper. With the lens at $f/11$ and illumination by a bank of four No. 1 photofloods with tracing paper in front, the exposure was 6 seconds. The positive print was made by copying onto the same kind of paper. It was loaded into the film holder as you would load film. The illumination of the negative was by two No. 1 photofloods on either side of the negative, lens at $f/11$, and exposure was 4 seconds. The finished print was produced in about one hour from the start of making the negative.

Making photographs by this means is one that calls for no new additions to your present equipment other than the chromium-plated mirror, and the mirror is required only if you want to make reversed negatives of subjects that have printed matter so that you can make correct reading negatives. Here is an inexpensive means of making photographs that will afford you lots of amusement.



I Shoot Birds

HAL H. HARRISON

A CLEAR-EYED kid lay hidden in a tangle of brambles. His eyes were glued to a box camera set on an old tripod in front of the nest and eggs of a catbird. From the camera to the boy's hand, thirty feet away, ran a black thread which had been lifted quietly from his mother's sewing basket that morning. Beads of perspiration formed on the little fellow's face, for he had waited a long time and the day was hot.

Suddenly, the boy stiffened. He held his breath. His mouth set and his eyes squinted. His fist clenched as he began to pull the thread. The catbird was at the side of the nest at last. Silently but surely the thread tightened. The release dropped and the camera shutter operated with a loud click. The catbird jumped into the air and flew away.

That was about twenty-five years ago, and I have often wondered what I did with that negative, for it was my first successful attempt to photograph a wild bird. From that June day near my home in

Western Pennsylvania I can date definitely the beginning for me of one of the most fascinating and thrilling hobbies in the world—the photography of wild birds.

In the years that followed, circumstances often took me away from my hobby for long periods, but memories of former days afield always drew me back again. Hunting wildlife with a camera gets into one's blood with the undying enthusiasm so familiar with the inveterate nimrod and angler. And it is a great deal easier on the creatures that are hunted.

In recommending my hobby to others, I always have the fear that my friends will encounter the same pitfalls that lay in my path. At best, the photography of wild things is not easy, but it is always easier for those who know some of the essentials. Those who had to "learn the hard way" suffered many discouragements that can be eliminated by the beginner who will profit from the experiences of pioneers.

For example, the beginner today could eliminate all the mistakes that I made a



HARRISON focuses the camera on the feeding log and runs the remote control wire to the blind some distance away. Such winter birds as juncos, tree sparrows, song sparrows, cardinals and white-throated sparrows (such as the one at the right) may be "shot" this way. *Below:* Young tree swallows.



few years ago while attempting to photograph a yellow-breasted chat at its nest in an elderberry. The camera was set within three feet of the nest which contained four eggs. I ran my remote control wire to a point about forty feet away. There I sat down to await the arrival of the chat. In three hours time, there was one fleeting glimpse of the owner of that nest. I gave up in disgust.

Today I can look back on my errors. The yellow-breasted chat is one of the wariest of our song birds. I should have used a blind and I should have had a companion walk away from the blind after I was hidden inside. Birds cannot count, thus the disappearance of a companion would have satisfied the bird that human danger had gone.

Next, I never should have moved in close to the nest while it contained eggs. Although some fearless birds will return



BLUE
JAYS

to their eggs despite the proximity of the camera, many will not. The yellow-breasted chat will not. When the young are hatched, the bird's instinct to return to the nest to feed becomes so great that in most cases it overcomes all fears.

In dealing with a bird as shy as the chat, the tripod should be moved up to the nest gradually, a foot or two each day, until it is at the desired distance.

A fundamental knowledge of the birds to be photographed not only makes the task an easier one; it makes it more interesting, too. A dyed-in-the-wool hunter knows the life histories of deer, rabbits,

pheasants, bear and other creatures that he loves to hunt. He finds joy in knowing intimate details of their private lives. The photographer of wildlife can take a lesson here from the old hunter.

A few photographers hold the tricks they use to outwit their quarry as secrets, but I have found that a majority of the bird photographers are willing and anxious to help those who enter their field. Indeed, it was from Dr. Arthur A. Allen, of Cornell University, one of the most successful of all bird photographers, that I learned that birds cannot count. This simple fact alone has helped me on many occasions

to out-smart a bird that otherwise never would have appeared before my lens.

The matter of using a blind often perplexes the beginner. A blind is anything used to conceal the photographer from the bird, and at the same time permits the photographer to watch the action of his subject. Where it is possible for me to do so, I use my automobile as a blind. Birds today are so accustomed to automobiles that they ordinarily pay little attention to them. Inside the car with the doors closed, the photographer is at an advantage. On other occasions, I use a tent-blind. In my case, this is a beach umbrella covered with burlap. It is closed entirely except for a slit in the front. Burlap is used because it permits the circulation of some air, and because the one inside can see out while the subject outside cannot see in.

An amusing incident involving a bird blind occurred in the summer of 1942. I erected a tent blind near the nest of a hooded warbler in the woods in the upper Allegheny valley in Western Pennsylvania. About a half-mile from this point is Dam No. 9 in the Allegheny River. I set up a blind on a Tuesday and did not return for photographs until the following Saturday; the object being to let the birds get used to



A CLOSE-UP of the author using the ladder system described in the accompanying story. A standard tripod screw is attached to the top of the post. The post slides through the top rung of the ladder and through the box attached to the underside. Here it is bolted in place at the desired working height.

**YELLOW
BILLED
CUCKOO**

the blind. On Saturday I shot my pictures and took the blind away. It was some time later that I learned by accident that United States Government employees from the dam had watched that "suspicious tent" in the woods for three days and nights. They relaxed their vigil on Saturday, and it was on that day that the would-be "saboteur" removed the tent. It was gone when they checked again on Sunday. Employees at the dam probably never would have known the solution to the mystery of "the spy with the burlap tent" if I had not volunteered the information.

It is not always necessary to use a blind. The wariness of the bird to be photographed will decide the matter. I recall the day I found the nest of an American redstart containing young birds. It was in a remote woodland, and I carried my tent-blind for quite some distance. It was a hot day and I perspired freely while erecting the tent, some forty feet from the nest. When the blind was ready, I approached the nest cautiously. The female was brooding. I came closer and closer. The bird did not move. Finally, I had to brush her off the nest to see the young. Both the male and the female fed while I was setting up the camera a few feet away. I took all the pictures I wanted and never went near the blind.

Strangers ask me continually if I use a telephoto lens. The popular belief is that pictures of wild birds must be taken at a great distance from the birds. That is not true. My pictures are all shot by remote control. Although I am often far away from the subject, my camera is not.

I do not use a telephoto lens because it does not permit me to use the auxiliary lighting that I need for good pictures. Few pictures of wild birds can be taken in full sunlight. Nesting pictures are almost always in deep shade. Thus, flash photography is the most satisfactory solution. To use flash is to eliminate the telephoto lens, for the power of the flash is dissipated at any great distance from the subject.

Flash is necessary also to provide sufficient light to stop the quick actions of a

bird. Often I am able to fire the camera at 1/200 second and still retain sufficient depth to assure me of an in-focus picture. The use of the fast film also is a great aid in stopping the action of a moving bird.

I am asked often: "Aren't the birds frightened by the flash?" Some are and some are not. Even those that are frightened at first usually accept it later, but many birds pay no attention to it at all. I wonder if they associate it with lightning, with which they are familiar.

There are many remote control systems. The one that is best is decided to a great extent by the camera one intends to use. Even the simple method of pulling a black thread to release the shutter is one method of remote control. I use today, however, a battery-wire-solenoid combination.

After I have focused on the spot where my subject is expected to appear (I use ground glass), a long wire is run from the camera to the blind. One end of the wire is attached to the dry cell battery bearing a release button. This goes in the blind with me. The other end of the wire is attached to a magnet mounted on a small panel. This plugs into the remote control outlet on the battery case which is attached to the camera. When the contact is made at the dry-cell battery in the blind, a solenoid action occurs in the magnet, comparable to the ringing of a door bell or the operating of door chimes. This action fires the battery, which trips the shutter and releases the synchronized flash.

A problem that bothered me for years was how to reach successfully nests that were too high for my six-foot tripod. Today, I use a series of four ladders: four, six, eight and ten feet high. These are ordinary stepladders purchased at any hardware or department store. The top rung of each ladder contains a square hole just large enough to admit a three-foot post. The top of the post bears a standard tripod screw. Through the post at regular intervals are bored small holes. A similar hole is bored through a box attached to the underside of the top rung of the ladder. When the post is slipped through the hole in the ladder and slides through the



YOUNG BITTERN

box underneath, a bolt may be placed at any desired height; the bolt passing through the box and through the post.

My ladder system permits me to reach nests as high as thirteen feet from the ground. To reach nests higher, a scaffold must be erected to supplement the ten-foot ladder. My ladders are carried on the

top of my automobile.

Photographing birds at their nests is by no means the only method open to the cameraman. certain birds that do not nest in an area may be photographed during migration through that area by the use of food and water as decoys. If a photog-

(Continued on page 92)

HIGH PRIEST OF DANCE PHOTOGRAPHY

A Visit to the Studio of Thomas Bouchard

BY HERMAN G. WEINBERG

THEY made a picture, poised in the doorway, tall, dark Tom Bouchard with his flashing black eyes and greying hair, and Nimur, his unique five-toed cat, regarding me quizzically from between Bouchard's long legs.

"Come in," said Bouchard. "I'll get some beer."

He disappeared into the kitchen, Nimur after him, and I settled myself into a streamlined armchair in the spacious, high-ceilinged duplex studio. Through the window you could see directly into the green rectangle of Bryant Park, in back of the New York City Public Library, with its endless parade of bums, scholars, and sweethearts. Eight floors up the roar of traffic on Sixth Avenue was a gnat's buzzing against the pane.

Except for a large portrait camera and some key lights, Bouchard's studio looks more like a painter's than a photographer's workshop. There was a large easel in one corner and in another, an up-ended stack of very advanced paintings. There were no photographs in evidence.

Painting is the key to Bouchard's method and direction in photography. His pictures are plastic, like good painting, and his compositions, which are deceptively simple but powerful, have a feeling for form and volume rarely found in a photograph. Painters admire his work, recognizing his spiritual kinship. Once after viewing an exhibit of Bouchard's pictures, Eli Faure, the distinguished author of the classic "History of Art," is reported to have cried: "Photography has become art!" Ferdinand Leger, the greatest living modern French painter, is another

Bouchard fan. Bouchard is justifiably proud of such encomiums, especially since so few painters are willing to praise a medium that is usurping many of the functions of painting.

Bouchard came out of the kitchen with glasses and two quart bottles of beer, and sat down beside me. Nimur tumbled about on the floor under Bouchard's feet.

It was a strange setting for an arduous champion of democracy—everything about him soft, graceful, almost feline, yet in his conversation betraying his passionate concern for the common man. Strangers meeting him for the first time find it hard to reconcile Tom Bouchard, the tough, two-fisted fighter for social justice, with Tom Bouchard, the urbane esthete of the camera and the "High Priest of Dance Photography."

However, Bouchard does not often let his progressive political and social sympathies obtrude in his creative work. Except for an occasional anti-fascist film, he keeps his photography and his politics carefully apart, although his social consciousness constantly inspires his camera, however indirectly. It can be argued that only a man who believed in the poetry of Walt Whitman could photograph the flotsam and jetsam of a tidal backwater—a sodden cigar box, some bedraggled weeds, and frothy scum—and make a beautiful composition out of it.

Nimur prowled silently about the large studio. Nimur means Tiger in Arabic (somewhere in his past Bouchard has Arabian antecedents), and you could see his feral instinct breaking through the veneer of thousands of years of domestication.

Bouchard's creative instincts have never been cowed or dulled by commercial conventions. Fiercely independent, he is that comparatively rare specimen in our machine society — the free artist. Bouchard has not accepted a commercial assignment in ten years. More than once this inability to compromise has brought him into temporary difficulties. But he has always managed to land on his feet, thanks to the steady income he derives from museums and universities for the rental of his films on art and the dance, and from the patronage of a loyal coterie of collectors who pay him \$100 and \$200 apiece for his photographs.

"How about seeing some of those \$100 pictures? I asked.

Bouchard laughed and drained his glass. He brought out a portfolio of his exhibit prints, including many of his famous dance studies. It is axiomatic among photog-

raphers that you can't relax before Bouchard's pictures. They are intense, dynamic, striving to burst the bonds of still photography. Bouchard's motion picture work is a direct outgrowth of his interest in the photography of the dance. Bouchard calls his work in this field "the marriage of image and motion." In these split-second shots, he crystallizes the essence of the dance as utter freedom of bodily movement, divorced from all story telling.

Bouchard's photographs are invariably presented in a low register, like Whistler's paintings. Being a subtle man, he eschews sharp contrasts and he delights to work, as it were, with a limited palette of gray tones. His pictures are seldom black and white, they are gray on gray. Curiously enough, this arbitrarily limited range of values often brings out tactile qualities and textures in his prints as sharply as if





they had been brushed in with pigment. For instance, in his picture of a black cat, against an equally black background, the hair of the cat seems so alive that you feel that if touched, it will give off sparks.

This peculiar printing technique is a

reflection of Bouchard's social outlook. He sees the world as a grim place with the cards stacked against most people. When there is social justice, perhaps he will let some sunshine into his pictures. Until then, he will continue, in the words



of the poet“ to see gray, like the lion.”

How did he get into photography?

“I won a \$10 prize in a newspaper contest in Houston, Texas. It was one of my first snapshots. I was so impressed that I decided to become a photographer.”

Before that, he had led a sort of Bret Harte existence as a cowpuncher and wild-cat oil prospector. The impetus of the prize money sent him off to Hollywood where he operated a portrait studio from 1917 to 1926. Strangely, he never tried to break in-



ALL
ILLUSTRATIONS
BY
THOMAS
BOUCHARD

to the films then. It was not until he began to photograph the dance that his interest in motion pictures developed. In 1926, fed up with Hollywood materialism, he fled to Paris and plunged headlong into the dizzy intellectual ferment of the Left Bank. He cut a swath. He was given the first one-man show of photographs ever held in Paris. He wore his hair long over his collar, drank innumerable pernod. He had a wonderful time and was broke most of the time.

In 1932, financial exigencies drove him back to America. But magazine work constricted him. He grew unhappy and he paused to take stock of himself. He realized that he would be happy taking only the kinds of pictures he wanted to take—come hell, high water and rent bills.

Whitman's credo spurred him on: "Let me have my own way . . . to start the cold or heat . . . to sail a boat, to manage horses, to beget superb children . . . to speak readily and clearly . . . I must follow up these continual lessons of the air, water, earth . . . I perceive I have no time to lose." He gave up his job and he has not had another since.

Fortunately, money came in. It came through the sheer vitality of his work. In New York he showed at the Alma Reed Gallery, at the Brooklyn Museum, at the Museum of Modern Art. At a dance festival in Radio City, he was represented by both stills and films on the dance. His "Underground Printer" was the first anti-Hitler film made in America. Last year he gambled more than \$3,000 in making



a film-analysis in color of the art of his friend Leger. This film is now beginning to pay off—both esthetically and financially. It had a successful premiere at the Philadelphia Museum last March, and the OWI will distribute it abroad as cultural propaganda.

I got up and Bouchard walked me to the door.

"Above all, what interests me are

young eyes looking freshly at things—that's a phenomenon which never grows stale," he said. "All progress in art comes from it. We must learn to see beyond the surface of things, for only then can we perceive the thing itself."

We shook hands, and I stepped through the door. Nimur sprang silently from behind a chair and made for some invisible phantoms in a corner of the studio.



SIERRA STORM

CEDRIC WRIGHT

THE MUSEUM OF MODERN ART
Announces an Exhibit of
CREATIVE PHOTOGRAPHY

AUDREY GOLDSMITH

USING his camera as a tool to express what is in his mind, the creative photographer cleverly foreshortens the beak of a pelican to emphasize his enormity, or shoots a portrait from knee level to add power. He recognizes the significance of the subject and gives it intensity. Psychologists say that an identical scene is perceived differently through the eyes of different people. What makes for this difference of report? The background of the individual, his interests, and his learning, form a pattern through which he sees all objects.

A plane skimming through a billowy sky creates a different mental picture in the eyes of each viewer— The pilot on the ground may say, "There goes a B-24 at 1500 feet." The meteorologist looks at the clouds and sizes up factors in relation to the weather the plane may encounter. The lad playing in his backyard says, "Gee, . . . when I grow up I want to fly a four engined plane clear 'round the world." And the photographer looking through an opening in the trees, thinks of a picture, framed, and there but for a fleeting second for his camera to capture.

Another photographer, disinterested in planes, may wait until the B-24 has passed and the clouds form another pattern, and then record their majesty and drama through a red filter.

The man behind the camera controls the whole mood and meaning of the image he records. Some of the controls we, as photographers, may use to create an impression are displayed in the exhibit, compiled by the Museum of Modern Art. Among the photographers, whose work appears in the exhibit are: Ansel Adams, Helen Levitt, Berenice Abbott, Edward Weston, Paul Strand, Henri Cartier Bresson, Arthur Rothstein and Andreas Feininger. Their photographs show how the camera may be used to create an impression and transplant it to the mind of the viewer.

This exhibit is the third in a series produced in quantity for purchase and display in museums, colleges, libraries and veteran's hospitals. There are twelve red

and light blue heavy cardboard panels, 30 x 40, which include 25 enlarged photographs and many smaller ones illustrating the various technical points. The headings of the various panels are as follows: "the photographer is an artist, he works with a mechanical tool, his medium is a scale of values, he selects the subject, he composes with the camera, he selects the moment, the camera records infinite detail, the camera stops or prolongs motion, the camera translates color into black and white." Each of these headings is explained in the accompanying text on the panel and each point is ably illustrated.

Boxed for shipping, copies of the exhibition are for sale at \$25 plus transportation charges from New York, based on approximately 45 pounds. It is hoped that the exhibit will not only provide inspiration and instruction for amateur photographers, but that it will also interest more laymen in photography.

THE EXHIBITION shows how we can express our ideas through the medium of photography, using the capacities and limitations of the camera to say what we like about a particular subject.

the camera creates its own perspective



In angle shots, where the camera is pointed either up or down, lines which appear as verticals and horizontals to our eyes are made to converge and therefore become diagonals. Diagonal lines create a sense of movement, and these shots usually dramatize, emphasize height or depth, and suggest power.



But when the subject in no way implies these qualities, angle shots will always look out-of-place and ridiculous.



PHOTO DATA

CLIP SHEET FOR PERMANENT REFERENCE

PROCESSING FORMULAS FOR ANSCO COLOR REVERSIBLE FILM

By James E. Bates

From the *Ansonian*

In line with its policy of placing as much as possible of the color process in the hands of the photographer himself, Ansco has recently released the formulas for the Ansco Color Reversible Film processing solutions. By originally supplying the Ansco Color Processing Chemicals in packaged form only, Ansco could be sure that photographers trying Ansco Color Reversible Film for the first time would not encounter difficulty because of impure or otherwise unsuitable chemicals. Below each formula is a description of what each chemical does and what happens if the amount of that chemical is either increased or decreased. When mixing large quantities of solution, it is advisable to multiply the metric scale, rather than the avoirdupois, as the former are the basic formulas. For convenience sake, avoirdupois scales were figured to the nearest accurate measure used in one quart.

The experimenter should bear in mind that with Ansco Color Film he is working not with one emulsion but with three emulsion layers. It is necessary that these layers develop simultaneously to give the same effective emulsion speeds and the same shaped characteristic curve or else improper color balance will result.

Errors in weighing or improper changes in the constitution of any one of the developing solutions may disturb the relationship between the speed or contrast of the emulsion layers and upset the color balance.

It is absolutely essential that chemicals of high purity be used to prepare all formulas, for chemical contamination which may be of little or no consequence for the processing of black-and-white materials can cause bad staining with color film. It is therefore of the greatest importance to use only chemicals that have been thoroughly tested in combination with Ansco Color Film.

For this reason Ansco strongly advises photographers to use Ansco tested chemicals. This is especially true of the color developing agent, Colamine.

Photographers familiar with the processing of Ansco Color Film will notice another point in connection with the temperatures specified for the various solutions. Up till now, a temperature of 68° F. has been recommended for each processing bath since whenever this is feasible it is desirable to maintain all the baths at the same temperature. However, in some of the steps there is a possible range of temperatures which will give satisfactory results and these have been specified immediately

following each formula.

Ansco Color Reversible Film may be handled and developed under dim green, indirect safelight, with Ansco A-3 filter, and 10-watt bulb. Do not allow safelight illumination to strike film directly.

Let us consider each of the processing solutions in detail.

FIRST DEVELOPMENT

Ansco No. 502. First Developer for Reversible Color Film

	Metric	Avoir.
Water 65-90° F.	750 cc.	24 oz.
Ansco Metol	3 g.	44 gr.
Ansco Sodium Sulfite	50 g.	1½ oz. 80 gr.
Ansco Hydroquinone	6 g.	90 gr.
Ansco Sodium Carbonate, monohydrated	40 g.	1¼ oz. 40 gr.
Ansco Sodium Thiocyanate	2 g.	30 gr.
Ansco Potassium Bromide	2 g.	30 gr.
Water to make	1 l.	32 oz.

Do not dilute for use.

Develop both Daylight and Tungsten Type Film 12 minutes at 68° F.

The first development of reversible color film is analogous to negative development of black-and-white film, in that the exposed areas of silver halide are reduced to form a metallic silver negative image. However, by black-and-white standards, the first developer solution for color film is very energetic for it must reduce all of the silver halides in the heavily exposed areas in order to insure clear highlights when the film is reversed. If used for black-and-white negative film, No. 502 First Developer would require only one-third the developing time of a normal black-and-white developer such as Ansco 47 and would produce more fog.

Variations of the metol and hydroquinone concentrations may be made to permit slight increases or decreases in development times, but only moderate variations are possible before color differences become noticeable. The metol to hydroquinone ratio may also be changed to obtain slightly softer or steeper gradation, but in attempting to soften the gradation by increasing the metol, care must be taken to retain sufficient hydroquinone in the formula, for high concentrations of metol alone will not give sufficient density to insure clear highlights.

No. 502 Developer also contains sodium thiocyanate which gives added developing potential and



(This striking photo was made by Sarra for Abbott Laboratories)

"Give Yourself a Photo Assignment," Says Ace Photographer Sarra

VALENTINO SARRA, top-rank photographer, advises amateur photographers to remember that the professional succeeds only by carrying out definite assignments from clients. "So test yourself on various assignments," he says. "Try to show 'Two Youngsters Quarreling.' Or pretend you've been told to make a picture that means 'Sunlight.' Be self-critical. Clients are exacting critics."

Follows Client's Wishes

Sarra likes best to take pictures which tell a simple, honest story with no trickery. He asserts, "When a photograph looks too much like a photograph it is no good." Notwithstanding his pride in the art of photography, he usually does exactly what his client wants, believing that it is right to follow the client's wishes. If Chase & Sanborn tell him to photograph a cup of coffee in such and such a way, he follows these directions on his first pictures, then in later shots tries to add to the original conception. "After all," says Sarra, "Chase & Sanborn have watched photographers working on thousands of pictures of coffee cups. Certainly they know more about it than I do."



A great picture-making team—Sarra and his Speed GRAPHIC.

Fed Up With Nudes

Sarra's first assignment with nudes was a remarkable experience. In a single day he photographed 50 or 60 Earl Carroll beauties (individually!), each wearing an ounce or less of cheesecloth. "I got so fed up with nudes that I've hardly taken another since then," Sarra claims dejectedly.

One day Edward Steichen saw a Sarra picture in a New York Camera Club salon. Steichen caught the flash of genius, got in touch with a friend in one of New York's biggest studios who instantly hired Sarra. Today Sarra is on his own; there are Sarra studios in three big cities and the Sarra gross income hits a very attractive six-figure level.

Except for one of the smallest models, Sarra has every GRAPHIC and GRAFLEX Prize-Winning Camera which we make. He uses them all. His final word of advice is that the $3\frac{1}{4} \times 4\frac{1}{4}$ Speed GRAPHIC is the best camera for amateurs.

GRAFLEX, Inc. Rochester 8, N. Y.
formerly FOLMER GRAFLEX CORPORATION

at the same time dissolves out the more insensitive smaller grains of silver halide which do not ordinarily develop. Because of this solvent action, the concentration of sodium thiocyanate is relatively critical. Too much will dissolve out more of the silver halide than is desired while too little will fail to clear the highlights. Because the yellow layer is on top where the developer solution acts on it directly, changes of thiocyanate concentration are particularly noticeable as differences in the amount of yellow in the finished transparency. Deviations of as little as 1/10 gram per liter produce noticeable changes.

Sodium sulfite serves the function of a preservative exactly as in black-and-white developers, but with color film it also serves to insure clear highlights by exerting slight solvent action on the silver halides, particularly in the yellow layer. Considerable increases or decreases of sulfite will not affect the keeping qualities appreciably but will affect color balance by changes in solvent action.

Another function of sodium sulfite in the First Developer is to prevent any coupling between the oxidation products of metol and hydroquinone and the color components incorporated in the layers. If such coupling should occur, undesirable stains would, of course, result.

Moderate changes of sodium carbonate in the First Developer have only slight effects on developer characteristics. Increases or decreases of 10% will slightly lower or raise developing times, but will not harm color balance.

As in black-and-white developers, potassium bromide is used as a restrainer to prevent excessive fog and to minimize the shifts of developer characteristics as the developer accumulates additional bromide through use.

SHORT-STOP

Anso No. 851. First Developer Short-Stop for Reversible Color Film

	Metric	Avoir.
Water 65-90°F.	750 cc.	24 oz.
Anso Sodium Bisulfite.	50 g.	1 1/2 oz. 80 gr.
Water to make.	1 l.	32 oz.

Do not dilute for use.

Use for 3 minutes at 60-70°F.

This Short-Stop solution is again analogous to black-and-white negative short-stop solutions in that it stops development by neutralizing the developer carried over with the film. Sodium bisulfite is excellent for the purpose as it does not evolve large bubbles of carbon dioxide which would blister the emulsion. Dilute acid solutions such as 1% Acetic may also be employed as a short-stop, but their use is attended with the dangers of gas blisters from rapid neutralization of the developer carbonate. Higher than 5% concentrations of sodium bi-

sulfite may also cause blisters. The danger of gas blisters is greater with the more fragile multiple layer coatings of color film than it is with black-and-white film. The exhaustion capacity of formula No. 851 is in excess of four 8x10" sheets of film per liter when the recommended procedure of carrying the film directly from the developer to the short-stop is followed.

The recommended short-stop time of 3 minutes may safely be extended for several minutes without harming the film, but this merely adds to the length of the process. Room lights may be turned on after 3 minutes treatment in the short-stop and left on for the remainder of the process.

WASH

Following Short-Stop No. 851, the film should be rinsed for 30 to 60 seconds in running water of 70° F. or below. In cold hard water this wash may safely be extended for several minutes if desired. Longer times in soft water or water warmer than 70° F. may cause softening and reticulation of the emulsion.

In this wash and also in all subsequent washes, "hard" water is less likely to give excessive swelling and softening of the emulsion than so-called "soft" water. The dissolved calcium and magnesium salts which give the water its "hardness" and cause so much trouble to the housewife striving to get a good lather in her wash actually help suppress swelling of the emulsion and permit longer washing times. Water containing less than 100 parts per million of dissolved substances should be considered "soft" and requires minimum washing times. Water with over 200 parts per million of dissolved materials is probably "hard" and washing times may be lengthened if desired.

The degree of swelling is also greatly influenced by water temperature. Softer water may be tolerated at temperatures of 50° F. than at 70° F. In no case is it desirable to process film with wash water temperatures exceeding 70° F.

It should be noted that certain types of impurities, such as iron salts or dirt particles, may give stains or spots when processing color film. However, experience to date indicates that water furnished by any city as "fit to drink" is satisfactory for processing color film if the recommended washing times are observed. The small amounts of chlorine added to destroy bacteria do not appear to give objectionable results.

If either the First Developer or Color Developer formula is mixed with "hard" water, slightly cloudy solutions may result from precipitation of dissolved salts. These particles may cause spots if they settle on the film surface, but they are easily removed by filtering or decanting.

(To be continued in September)

CLASSIFIED WANTS ADS

MINICAM PHOTOGRAPHY has 70-962 paid A. B. C. monthly circulation including all manufacturers, jobbers and dealers in the photographic industry; as well as well-known photographers, instructors and classes in photography, photo squads of the Armed Services, advanced amateurs, beginners, and the Technical Library of EVERY Army Air Base in America. These 70,962 readers are an influential market. Want Ads: 10 cents per word including name and address. Zone number free. Minimum 15 words, payable in advance. All ads restricted to agate type. Forms close July 15 for September issue.

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MISCELLANEOUS

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CAMERA CLUB

NEWS AND IDEAS

Just about now there's far more emphasis on picture making outdoors than camera club activities inside. This is the time of year for the landscape artist to go to town, or is it the country? He will come up with some pretty mediocre stuff, too, and submit it to the first club meeting in the fall. After this first masterpiece of the new year has been duly torn apart under the guise of friendly and helpful criticism, our friend is likely to decide that indoor portraits are for him and dash out after a new spotlight. Now this would be a sad state of affairs indeed if it were true of every amateur. But it isn't. There's something pretty tenacious about the camera fan who wants to learn, to improve his technique, to emphasize his seeing. He has something to interpret, even in a landscape. It may be a factual record, or it can reflect one of nature's more dramatic moods. These are the pictures that win club competitions, that are sent on to salons and are sometimes pounced upon by a talent scout for the advertising agency. Good landscapes are scarce as the paper to print them on, but they await us all. If you think Nature offers no challenges, get up early some morning soon, and with camera in hand, start on the prowl. Walking is a lost art in America and something should be done about it. Maybe your camera is the answer.

THE MEMPHIS PICTORIALISTS have for some years sponsored the first salon of the exhibition year which starts July first. Their particular brand of Southern Hospitality brings guests from far and near... these guests go home and talk... return with fresh ideas. The Men of Memphis have established a reputation. This year they racked up another "first." Wood "Pops" Whitesell of New Orleans was on the jury, and this Freshman judge (69 years young) was delightfully thorough in his analysis of the prints. The picture below was taken by Salon Chairman Carrol C. Turner at a picnic directly after the show had been selected. The judges, left to right, Cecil B. Atwater, Newtonville, Mass.; "Pops" Whitesell and George R. Hoxie of Oxford, Ohio, were given first grab at that huge tray of fried chicken on the right.



Premier of South Africa, Field Marshall Jan Christian Smuts was made an honorary member of the CALIFORNIA CAMERA CLUB during his attendance at the San Francisco Conference.

The boys at the BALTIMORE CAMERA CLUB are probably thankful that they heeded the pep talk given to them by member A. Aubrey Bodine APSA. THE PHOTOGRAPHIC SOCIETY OF AMERICA has just announced the winners in the "A" group of the Continental Print Contest. BALTIMORE CAMERA CLUB is tops this year with an accumulated total of 337 points. They were pushed all the way by the following clubs which finished in this order: PHOTO GUILD OF DETROIT, 320 points; THE CAMERA CLUB (New York), 318 points; CALIFORNIA CAMERA CLUB (San Francisco), 316 points; QUEEN CITY PICTORIALISTS (Cincinnati), 312 points. Now that all those chemicals are down the drain Minicam offers its congratulations to these hard working club members who are responsible for all the winning points. Clubs will regroup their photo ammunition for a fresh assault on PSA's new contest in the Fall.

Editor Herbert M. Howison outdid himself on the large annual issue of "Thru the Dark-room Door," the monthly publication of the CLEVELAND PHOTOGRAPHIC SOCIETY. Besides the usual review of monthly meetings ably reported by John C. Moddejonge, there appears a lecture by M. K. Leggett, color article by Dave Darvas, winning picture from the member's annual show and a page of informal shots of members at their recent banquet. Visitors in Cleveland are invited to drop around on a Friday night and look in on the society at 323-325 Caxton Bldg.

A movement is under way at MISSION CAMERA CLUB, San Francisco, to start a specialized division within the club to be known as the "The Conscience Struck Group." This outfit will meet periodically to print the pictures they had promised to print for their friends six months ago. Nice way to further family tolerance!

Kodak Communications

For additional technical information about Kodak Developers D-23 and D-25 described in MINICAM, June, *Two-Chemical Developer*, see Kodak Communication No. 977, *An Elon-Sulfite Developer and Elon-Sulfite-Bisulfite Fine Grain Developer*, by R. W. Henn and J. I. Crabtree, P.S.A. Journal, Vol. 10, page 727, December 1944.

For further information about the single solution intensifier Kodak In-6, described in MINICAM, July, *Accentuate the Negative*, see Kodak Communication No. 996, *A Single Solution Intensifier for Very Weak Negatives*, by L. E. Muehler and J. I. Crabtree, P.S.A. Journal, Vol. 11, page 81, 119, February and March 1945.

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PRODUCTS

Improved G-E Mazda Blue Photoflash Lamps

G. E. LAMP DEPARTMENT announces that its Mazda Blue Photoflash lamps have been improved to give 40 percent more light output and to be 45 percent more effective photographically. Lamps affected are the No. 5B and No. 21B.

Production on these lamps, it is expected, will be underway at an early date. To aid in the identification of packages containing the improved lamps, both lower corners of the contents label will be plainly clipped.

Improvement in the blue flash lamps is attributed to marked improvement by Lamp Department laboratories in the lacquer for these photolamps. Result: a high degree of color fidelity may now be obtained with all daylight-type color films on the market. Differences in spectral response of film made by various manufacturers complicated the problem of achieving color balance fidelity.

Published exposure data will be obsoleted by the improved lamps, but new charts will be published in the September issue of MINICAM. Until new sleeves or wrappers are available, present ones will be stamped to indicate that, in general, the existing guide numbers should be increased 20 percent. This is equivalent to a reduction in lens aperture of approximately one-half stop.

New Kodak Photographic Notebook

THOUSANDS of amateur and professional photographers alike throughout the United States have found Kodak's Reference Handbook of great value in carrying on their preferred hobby or business.

From Rochester now comes the announcement of the new Kodak Photographic Notebook which is supplied with four specific items: (1) A Registration card. (2) A list of articles on special photographic subjects that are available on request. (3) Five separator pages with blank tabs. (4) Fifty sheets of ruled paper.

Photographers who purchase the Kodak Photographic Notebook and who return the registration card will be sent, about twice each year, an up to date list of photographic articles which will be sent direct to those interested, without charge, upon request. These articles will be punched for insertion in the Notebook for reference purposes. The separator pages give the owner an opportunity to index his Notebook in whatever manner will best serve his own photographic interests. The fifty sheets of ruled notebook paper are for darkroom records and other notes.

With these features, the Notebook provides its owner with the opportunity to make up a work book and reference source tailored to his own interests and requirements.

The Kodak Photographic Notebook is available through photographic dealers for \$1.00.

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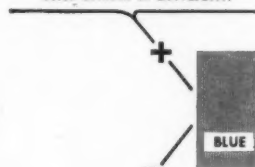
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This represents the relative color content of DAYLIGHT.



Color content of new G-E BLUE PHOTOFLASH. See how it matches daylight.



HERE is final photo COLOR BALANCE when daylight is used with color film.

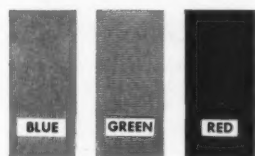


Chart left represents approximate average sensitivity of daylight color FILMS.

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Thanks to their improved filter coating, the new G-E Mazda "blue" Photoflash lamps will permit using one-half stop smaller aperture or moving farther away from the subject.

Availability: Full production on these new lamps is expected fairly soon.



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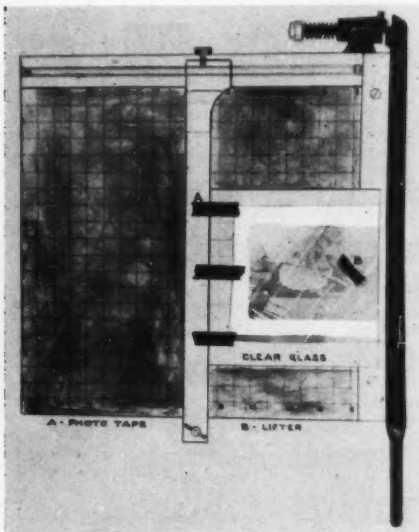
LARGE PRINTS that are ferrotyped have a habit of drying first at the corners. When this happens the prints take on what is some-



times called an "oyster shell" appearance. To prevent this, place four large nuts, one at each corner, on the print. The nuts will anchor the print and allow it to dry evenly.—William Swallow.

Fast and Accurate Trimming

A SQUARE CUT piece of glass and three small pieces of photo tape are aids to accurate trimming. If you wish a 1/4 inch margin, place the glass that distance from the stationary cutting edge, and hinge the glass to the backstop



with the tape. To make a lifter for the glass, make a loop from a piece of tape and stick it to the glass, as shown at "B". A deeper margin can be made at the bottom of the picture, by pushing it 1/16" further under the glass before cutting. If your printing mask is square all around your squinting days are over.—John E. Post.

Storing Roll Films

AN EMPTY shaving cream jar, or similar wide mouthed jar, provides all-important protection from moisture in the air, in damp



climates or during rainy seasons. When shipping film to men or women in service in hot humid areas, such as the Southwest Pacific, film may be protected in this manner.—Robert Scott.

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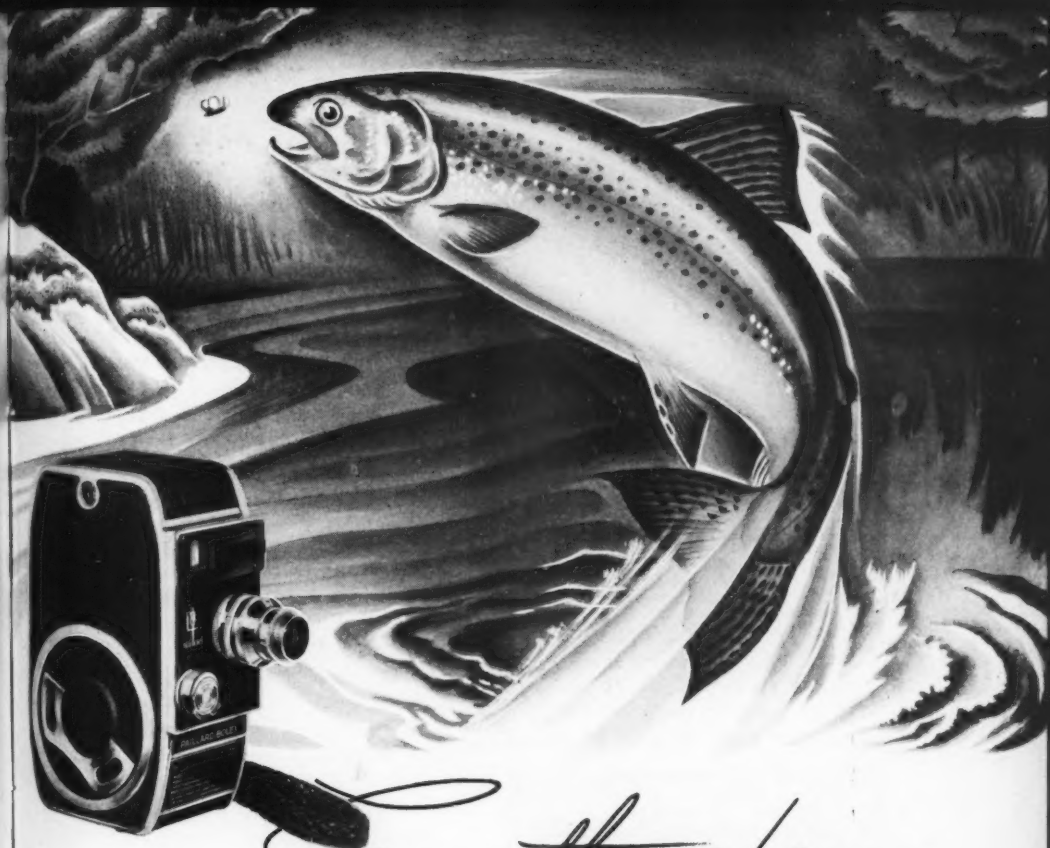
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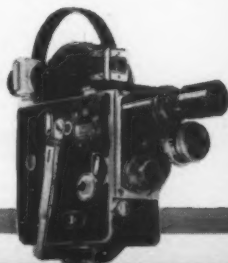
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CHARACTERS ARE A CINCH

(Continued from page 53)

want—I know what you're after. You're just trying to get me over to the gas chamber. You want to gas me—you want to put me out of the way—you don't want to pay me my pension any longer!"

I go about taking pictures of Pershing Square characters as simply as possible. I have almost a set system. I find my most successful pictures are wire sharp with perfect skin texture, so I now take all portraits of men this way. It produces the third dimensional effect with that appearance of strong character that all men like.

I use a 4x5 view camera with a relatively long focus lens, a ten inch, and only two 500-watt lights. Sometimes I use a third for more detail in the hair. I use a medium fast ortho film on the straight character shots because it gives a more emphatic rendering of the skin texture. (But I switch over to panchromatic when I take portraits of men. It gives good skin texture but does not emphasize the freckles, blotches, and other skin blemishes.)

The lights naturally have to be used in a cross-lighting effect to bring out the texture—one as a close-up main light, the other as a fill-in. One soon learns how to make the lights give the utmost texture—the clean cut delineation so necessary in this type of picture. A few quick glances into the ground glass, while arranging the lights, tell if they are giving effect.

I usually print on semi-glossy paper; but sometimes use glossy. These papers bring out the detail and chloro-bromide papers especially give the range of tones that I like.

What advice can I give to those who want to take character pictures? None really, more than I have, except to repeat; master one film, one or two developers and other essential equipment that will do the work satisfactorily. That part is just mechanical—pure technique. Know exactly what you want in sharpness, texture and quality, practice, practice and then practice some more, until you know exactly how to get what you want.

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RAILROAD PHOTOGRAPHY

(Continued from page 28)

advantage than in railroading. Though other subjects present varied and interesting contours, I hold that a freight train, snapped near dusk against a brilliant sunset, is unparalleled for beauty. Even the spokes of the engine drivers show up in a good shot and the low hanging smoke from the stack makes an exceptional pattern against a favorable sky. Masters of the railphoto art can paint astonishing pictures with a brilliant sunset, a freight train and a good camera.

This type of picture must naturally be made from a fairly respectable distance. Ninety to a hundred feet should be the minimum. Wait until the sun is half way below the horizon. Try to get a few other objects such as trees or boulders into the picture, preferably tall trees with sparse foliage. Shoot toward the engine and try to have a little sky above the train in your finished picture. If you shoot far enough back so that the lettering on the car and engine sides does not show, the effect will be more pleasing. In order to have each car wheel visible, you should shoot from a crouching or kneeling position; the camera not more than a foot off the ground. If possible, shoot while the whistle is being blown so the jet of steam from its blast will enhance the finished photo.

Finally' there are the inevitable color photos. Caboose are startling reds, locomotives glistening blacks, blues and greens; refrigerator cars are bright oranges and yellows, and passenger coaches handsome tuscans, olive greens and blues. Streamliners employ all the colors of the rainbow. Semaphores and switch targets furnish excellent photo subjects and few scenes are more colorful than a night color

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shot of a railroad yard in which switch engines swarm busily, open firebox doors tinging their smoke a ruddy orange-red.

Try to find a red car next to a yellow one, or a black locomotive before a white refrigerator car. Pick out newly painted equipment, not old, drab cars and, as with other photos, shoot your engines with plenty of smoke. Stainless steel equipment photographs well, as do the red bandanas worn by enginemen and firemen.

Shoot against drab backgrounds so the scenery will not outshine the train. Look for the bright patches of color printing on the railroad's herald, the numbering on locomotives, their striping and the colored flags sometimes flown from the locomotive. Capture the gleam of the locomotive's polished brass by day, the pale yellow disc of its headlight by night.

EDITOR'S NOTE: The people who follow railroad photography, far from being a clanish group, are like photographers everywhere only too anxious to coax you into their special branch of picture taking. There's a *Railroad Photographic Club*, at 47 Royal St., Allston Station, Boston 34, Mass. Henry P. Stearns is vice president and very helpful. He has on file 250,000 R. R. negatives. *The Kalmbach Publishing Company*, 1027 N. Seventh Street, Milwaukee, Wis., publishes a magazine for railroad photographers called "Trains," and a series of beautiful albums of train pictures.

A few of the well known railroad photographic hobbyists are Henry J. McCord, 53 N. Jefferson St., Batavia, Ill.; Howard Blakeslee, Sr., 335 Conklin Ave., Binghamton, N. Y., and Paul Stringham, Rock Island News Stand, Peoria 2, Ill. Like most photographic hobbyists we know they are very pleasant gentlemen.

Duell, Sloan and Pearce, Inc., 270 Madison Ave., New York City 16, will publish in 1946, "History of American Railroads," by Albert R. Beatty with over 1,000 illustrations.

And over all this, with loving care, presides the Association of American Railroads, Transportation Building, Washington, D. C. Robert S. Henry, assistant to the president, is always willing to gently stir the photographic pot and supply information.

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\$1.40 35mm. FILM SPECIAL \$1.40

Fine Grain Developed—Enlarged to 3x4
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27½ feet \$1.25 100 feet \$4.00

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"THE HOUSE OF PHOTOGRAPHIC VALUES"

142 FULTON ST. - NEW YORK - 336 MADISON AVE

I Shoot Birds

(Continued from page 69)

rapher maintains a feeding station for birds throughout the winter, he is privileged to take pictures of the winter birds that are attracted. Unusual visitors will come to the station in spring and fall.

The question of how a bird photographer should dress is one that is answered according to the conditions under which he is working. Comfort is the first consideration. Yet, comfort is not always a possibility. When the blind is to be set in a mosquito-infested swamp on a hot day, the choice between wearing enough clothes to discourage the mosquitoes or wearing little enough clothes to keep cool will end with the photographer doing some extra sweating in order to beat the mosquitoes. Brightly colored clothing should be avoided always. The photographer should blend with his surroundings in order to avoid being conspicuous to his subject.

To pass over lightly the need for great

patience in the photography of wild birds would be to mislead the inexperienced. With proper equipment, with sound knowledge of birdlore, and with a nice bag of tricks up his sleeve, the bird photographer has no complete substitute for patience. Other things may be acquired, but patience must be possessed.

Although I am ordinarily a most impatient individual, I have schooled myself to trust the old adage: "All things come around to him who will but wait."

As years go on, my enthusiasm for my hobby increases. Throughout the winter I plan my work for the coming season. I dream of outwitting the wary ones that have eluded me. I envision days when new species will fall before the only gun I ever use—my camera. It is a grand sport that makes the longest day too short. And it isn't the sport of kings because it is open to every person who can own a camera of any kind. It is even open to a little boy who walks away with a spool of his mother's black thread.



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The man who owns an Omega Enlarger appreciates its sound design, meticulous workmanship and rugged construction.

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MATURITY
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Here is your chance to name Wollensak's new postwar photo lenses . . . win one of these big prizes in war bonds. Send in your suggestions;

no purchase required. This contest ends with Wollensak's new postwar lenses named by our friends, the photographers of America.

Contest Closes September 30th



1st PRIZE • \$1,000.00
IN WAR BONDS

2nd PRIZE • \$500.00
IN WAR BONDS

3rd PRIZE • \$250.00
IN WAR BONDS

DEALERS' PRIZES • \$600.00
(SEE RULES) IN WAR BONDS

The name you suggest should apply to the *whole group* of Wollensak's new improved postwar lenses. It should cover Wollensak still lenses for professional use . . . Wollensak wide-angle and telephoto lenses for both amateurs and professionals . . . Wollensak cine lenses . . . enlarging lenses . . . projection lenses.

Send in your entry NOW!

For nearly 50 years, American photographers have known that Wollensak means GOOD LENSES. With Wollensak equipment serving our armed forces throughout the war, you'd expect that Wollensak's skill in wartime precision manufacture would mean *even finer* lenses after Victory.

NOW—you may help NAME these fine new postwar lenses . . . lenses that will help you make better pictures, bring you more fun from picture-making.

STOP IN AT YOUR NEAREST PHOTO DEALER FOR EXPLANATORY FOLDER.

"Hints" that may help you WIN

Wollensak

ROCHESTER 3, N. Y.

EASY RULES

1. No purchase is necessary to enter this contest.
2. Mail us on the blank opposite (or by letter or on the application in "Hints" folder) your suggested name for the new Wollensak Postwar Photo Lenses. Add not more than 25 words of explanation on why you consider the name appropriate; this is required.
3. Mail your entry to Wollensak, Box 1600, Rochester 3, N. Y. Include your name and address and the name and address of the store from which you buy your photo supplies; this is essential. (If you win first prize, the manager of your photo supply store and his employees will receive \$250 in cash or \$300 in war bonds. If you win second prize, the store manager and his employees will receive \$150 in cash or \$200 in war bonds; if you win third prize, he and his employees will receive \$75 in cash or \$100 in war bonds.)
4. Any resident of the United States or Hawaii may compete, except employees of Wollensak Optical Company, their advertising agency, and their families. Contest subject to all federal, state and local regulations and contest rules.
5. All entries must be postmarked before midnight, September 30, 1945.
6. All entries will be judged for originality, sincerity and aptness of thought. Judges' decision will be final. Duplicate names will be judged on basis of the statement accompanying each name. In case of tie, duplicate prizes will be awarded. No entries will be returned. Entries and ideas therein become the property of Wollensak Optical Company.
7. Winners will be announced in Wollensak advertisements as soon as possible after close of Contest. Winners will be notified by mail.

Upon request, dealer will assist a contestant in preparation of entry.

MAIL THIS BLANK TODAY!

"Name the Lens" CONTEST

WOLLENSAK OPTICAL CO., BOX 1600, ROCHESTER 3, N. Y.

Please enter the following name in your contest. My statement of no more than 25 words tells why I think the name I suggest is appropriate.

MY CHOICE _____ NAME FOR LENSES _____

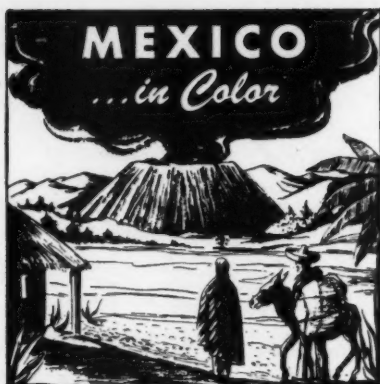
I PICKED THIS NAME BECAUSE _____ 25 WORDS OR LESS _____

I BUY MY PHOTO SUPPLIES AT _____

MY NAME _____

MY ADDRESS _____

(To be eligible, you must fill in dealer's name)
THIS ENTRY SUBJECT TO CONTEST RULES



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12 Kodachrome Slides

by Mike Roberts

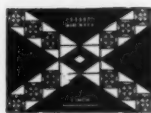
Headline-making PARICUTIN VOLCANO, exquisite lacquer ware at URUAPAN, the PYRAMID of the SUN, and nine other magnificent, colorful views of picturesque Mexico offered in this new Wesco release! All subjects taken by Mike Roberts on his recent Mexican tour. 12 slides in self-viewing panel complete with captions by Roberts...\$5.85 list. With Wesco viewer...\$7.50. Separately...50 cents each.

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2 1/4 x 3 1/4 (6x9cm)60
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4x595
5x7	1.45

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PHOTOGRAPHIC TEACHERS

(Continued from page 12)

Course is 18 weeks for both schools, 5 hours a week for day and 4 hours for nite school.

GEORGE BOARDMAN, 8165 Santa Monica Boulevard, Hollywood 46, California. George Boardman and Eva Reid Marsh, Instructors. Essential darkroom procedure—developing, printing, enlarging and allied subjects. Studio Portraiture and one particular subject student wants specialization in. Tuition is \$200 for approximately nine hours a week for eight weeks, night or day classes. Also instruction in modeling, oil coloring, etc., at \$10 per hour. Teaching is on the workshop plan with student assisting and participating in work actually going through the studio. Accept only two students at a time for complete course.

MARIN JUNIOR COLLEGE, Kentfield, California. General Photography. Course given during both Fall and Spring terms; one hour lecture a week and three or more hours laboratory work for 17 weeks. Two units of credit given. Course covers use of camera and its accessories, photographic chemistry, composition and darkroom. No tuition.

POLYTECHNIC HIGH SCHOOL, 16th and Atlantic, Long Beach 6, California. Don Meadows, Instructor. Courses in Elementary Photography, Fundamentals of Portraiture, Advanced Photography. Pupils may earn science credits for four semesters in the above, which are counted by the universities as elective credits in science. Work on the year book gives opportunity for specialization and training in the more difficult assignments. Sixteen weeks per semester, offered for Fall and Spring terms.

THE FRED ARCHER SCHOOL OF PHOTOGRAPHY, 2510 West 7th Street, Los Angeles, California. Fred R. Archer, APSA, Director. Courses in basic and advanced techniques, advertising, portrait and pictorial photography. Day and evening classes. Individual instruction. Year-round classes. Write for descriptive booklet.

HARVEY W. BROWN, Teacher of Photography at Winter, Inc., 525 West 6th Street, Los Angeles, 14, California. Offers Basic Advanced and Special Color Course. \$100 for basic course. Five hours a week for seven weeks. Laboratory. Harvey W. Brown teaches his own simplified techniques, specializing in "art in photography." Instructions are individualized and personal. Classes limited to four. Students may enroll at any time.

LOS ANGELES CITY COLLEGE, 855 North Vermont Avenue, Los Angeles, California. Sella Lovering, Instructor. Beginners Course gives 4 credits a semester; 2 lecture hours and 6 laboratory hours per week. Pictorial Photography and Advertising Photography each give 6 credits per course (20 weeks) and both have one to two weeks lecture and 8 hours laboratory per week. Newspaper Photography, offered only during Fall term, gives 2 credits, with one hour demonstration and 2 laboratory hours per week. No special certificate given, but if photography is taken with

regular courses a diploma with major in photography is given.

UNIVERSITY OF CALIFORNIA, Extension Division, Department of Mechanic Arts, Los Angeles, California. A. D. Keller, Instructor. Elementary photography—darkroom technique, laboratory facilities, composition. Night classes for 15 weeks, 1 lecture and 2 laboratory hours a week; 2 credit units; tuition, \$19.50.

MILLS COLLEGE, Oakland, California. Mr. Roi Partridge, Instructor. Course offered as part of work required for degree. Photography and its use as a medium of documentary and artistic expression. Technique, developing, contact printing, enlarging, composition, design, lighting. Students must provide own equipment. Two credits given per semester; two semesters of 16 hours each.

SEQUOIA UNION HIGH SCHOOL, Redwood City, California. Extra curricular group in photography given as a "supervised hobby."

SALINAS UNION HIGH SCHOOL, Salinas, California. Course in photography, 3 lectures, 3 laboratory hours a week for 18 weeks. W. Farr, Instructor. Fall term.

SAN DIEGO HIGH SCHOOL, San Diego 2, California. A. W. Nall, Instructor. Beginning courses in photography scheduled for morning and afternoon during fall semester, open to regularly enrolled high school students. Course includes laboratory work.

CALIFORNIA CAMERA CLUB, 45 Polk Street, San Francisco, California. Hal Roberts, Instructor in Composition and Pictorial Picture Making. One lecture and one laboratory hour a week for ten weeks. Night classes; Fall and Spring terms; \$10 a course. Anyone may take course.

NICHOLAS HAZ, c/o Jack Wright, 847 Asbury Street, San Jose, California. Image Management—portraiture, landscape, object photography. This is a course in concise, clear, complete exposition of all important elements of picture composition for photographers of any kind. Tuition \$25 for twelve sessions, each session lasting about two hours.

SAN JOSE STATE COLLEGE, San Jose, California. George E. Stone, A.M., Lester Brubaker, A.B., Instructors. Elementary Photography offered in Fall, Winter and Spring quarters: 3 lecture and 6 laboratory hours a week for 12 weeks, 4 credits. Advanced Photography offered in Fall and Spring quarters: prerequisite of Beginning Photography. 2 lecture and 4 laboratory hours a week for 12 weeks, 3 credits. Tuition is \$7.00 per quarter for regular students. College provides cameras, materials, etc. Photography is offered as part of Science program, although it may be taken as an elective subject. The Junior College offers an Elementary Course to qualified special students at a cost of \$8.00. A popular demonstration course under the title "Photography for Fun" is sometimes offered during summer session by Dwight Bentel, Journalism Department.

SANTA BARBARA STATE COLLEGE, Santa Barbara, California. Art Department offers course dealing with Photography in its

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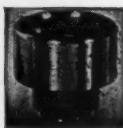
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CINE EXTENAR

It's the new **WIDE ANGLE** lens that every Cine fan needs to catch the whole picture. Simply screwed over regular 8mm. lens, providing identical focus and definition plus a **WIDE ANGLE**.

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Plus Tax

relation to commercial art. Includes composition and subject control as well as chemical processes. Runs 18 weeks, with 2 units of credit. Roy E. Lawhorne, Instructor. Industrial Education Department offers two courses in photography: Theory and practice of photography for personal and education use. Darkroom technique, portraiture composition, lighting and the making of photographic slides. Night classes, 18 weeks, \$10.50 per semester, course is not restricted. Audio-Visual Education, a functional course to acquaint the student with various kinds of audio-visual materials and their use in classroom teaching. Day classes, Fall and Spring term, \$7.00 a semester. Both these classes taught by Mrs. Genevieve Estes. **SANTA ROSA JUNIOR COLLEGE**, Santa Rosa, California. Clark Nattkemper, Instructor. Elementary Photography, darkroom technique given during Fall and Spring terms. Emphasis is placed on chemistry involved in photography. One hour lecture, three hours lab per week. 34 weeks, 12 credits per course.

COLORADO

COLORADO COLLEGE, Colorado Springs, Colorado. Fundamentals of Photography, Dr. Paul E. Boucher, Instructor. Theory and laboratory, including some work in color photography. Fall semester, 2 lecture and 3 laboratory hours per week for 15 weeks; 4 semester hours credit. Student may elect course alone with tuition in proportion. Some advanced work in photography may be done by qualified students. Summer School offers 4 lecture and 6 laboratory hours of beginning photography for 8 weeks, giving 4 semester hours credit.

COLORADO STATE COLLEGE, Fort Collins, Colorado. Louis R. Weber, Instructor. Photography given during Fall and Summer terms. 2 lecture and 2 laboratory hours a week for 12 weeks, resulting in 3 credit hours. Tuition and registration fee is \$20. Inorganic Chemistry and beginning Physics required.

WESTERN STATE COLLEGE OF COLORADO, Gunnison, Colorado. C. R. Walker, Instructor. Elementary Photography. Course designed to give student a start in photography and to teach fundamentals of developing and printing. One lecture and 3 laboratory hours per week for 12 weeks; given during Spring term; one credit hour. Given only to regular students; tuition is \$30 per semester for full schedule.

CONNECTICUT

BURDICK JUNIOR HIGH SCHOOL, Forest Street, Stamford, Connecticut. C. Dayton Snyder, Instructor. Elementary and Advanced Photography. Class is sponsored by the Adult Education Department of the public school system of Stamford. Amateur beginners and advanced amateurs receive instruction, demonstration and lectures. Actual operation in darkroom, studio and field work is done as much as time will permit. Individual problems and interests are brought before the class for discussion and demonstration. Tuition free. Course, 25 weeks, 2 hours a week; September and March; 7:30-9:30 P. M.

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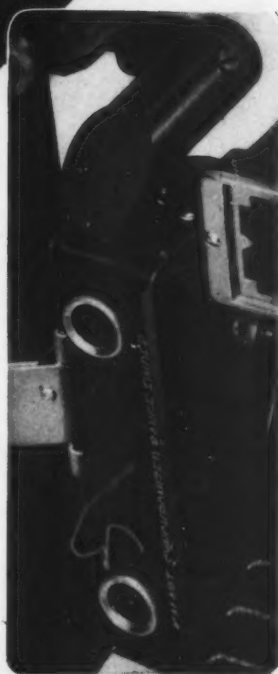
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or night!

Turn the focusing knob until the two light beams of the Focuspot* merge on the subject. Automatically your picture is not only in sharp focus but approximately centered on the film, thus permitting perfect shots with camera held overhead, floor level, waist level or any level.

The Focuspot* can be used only in conjunction with the Kalart De Luxe Model E Range Finder which can be installed on most press and film pack cameras but not on roll-film types.

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Not Copies — Made from Exposures On The Original
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\$1.00 each 4 for \$3.00
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Made from Original 35MM Double Frame Negatives
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36 ENLARGEMENTS**

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Prove it to yourself—send your next roll to us. Fine grain developing, "electric-eye" precision. Modern Beauty prints $3\frac{3}{4} \times 4\frac{1}{4}$ ", deckled, with embossed margin and date. If less than 25 prints Free print credit. Send money and roll or write for FREE Mailers.

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FLORIDA

TECHNICAL HIGH SCHOOL, 1410 N. E. Second Avenue, Miami 36, Florida. Charles Karns and William Burton, Instructors. Students attend three hours shop daily and three hours related work, math, English, science, composition art, drawing, etc. Thirty per cent of time is spent in related classes dealing directly with things photographic. Classes are divided in small groups of three and four and rotate weekly, speed cameras, portrait work, office and reception room work, contact print room, projection room and the sixth does developing and chemical mixing for all others that week. During a six weeks grading period student receives training in each of departments mentioned above. 72 weeks, 30 hours a week. No tuition charge. Student who completes course satisfactorily can pass Florida State Board and become a licensed photographer.

GEORGIA

BERRY COLLEGE, Mt. Berry, Georgia. L. E. McAllister, Instructor. Department of Physics offers laboratory course in photography. A large portion of the time in this course is used in doing photographic work for the school and for the school annual. Certain experiments are done preliminary to work for the sake of developing technique. This is an 18 week course with 4 hours each week, and is given only as part of the regular curricula. Two semester hours credit are given for course.

IDAHO

BOISE JUNIOR COLLEGE, Boise, Idaho. Prof. Jacob Bauer, Instructor. General course in Elementary Photography offered in previous years has been discontinued, unless there are enough special requests for course. Write Professor Bauer.

UNIVERSITY OF IDAHO, Moscow, Idaho. H. Walter Steffens, Ph.D., Instructor. Zoology Department offers course in photographic technique. Developing, printing, enlarging, lantern slides, copying, lenses, color separation, color transparencies, photomicrography, infra red, poloroid filters and oil tinting. This course is designed for the scientist and not for the training of professional photographers. Students are required to have finished one year of chemistry or physics in college. No tuition for Idaho students. \$30 per semester for out of state students. Laboratory arrangements are available—\$5 fee. First semester, 18 weeks at 5 hours a week. Second semester, 18 weeks at 4 hours a week.

ILLINOIS

EASTERN ILLINOIS STATE TEACHERS COLLEGE, Charleston, Illinois. Dr. H. E. Phipps, Instructor. Chemistry Department offers Elementary and Advanced Photography to students who have completed a course in laboratory science. Course is not planned to prepare professional photographers, but to give a good background in photography so that the person completing course will be fitted to handle camera club work and do the

"ILEX ACME SYNCHRO SHUTTER with ILEX NEW PARAGON LENS...

***Iron Out All
Difficulties
Associated with
Synchronized
Multiple
Flash Shots,"***

**Says Bill Walling
of Hollywood, Cal.**



Photos by Bill Walling of Hollywood taken with Ilex No. 3 Acme Synchro Shutter and Ilex New Paragon Lens 7 3/4" focal length at F. 38 with No. 28 G. E. Flashies

Bill Walling dramatizes his opinion and demonstrates his use of the Ilex Acme Synchro Shutter and New Paragon Lens in the two photos shown here. He also says, "unexcelled for multiple flash color photography where the margin of latitude is extremely critical."

Enthusiastic reports like this are coming in from critical users who say the Ilex Acme Synchro Shutter is the answer to the photographer's dream of a dependable, accurate, built-in synchronizer. Can be used with any kind of flash bulb. (From 0 to 23 milliseconds time delay.)

Ilex Acme Shutters and Ilex New Paragon Lenses are performing dependably on all battlefronts in extremes of cold and heat.

Orders from the armed forces at present limit the sale of Ilex Acme Synchro Shutters to those holding high priorities. A complete range of sizes for all requirements will be available as soon as conditions warrant. They're worth waiting for. In the meantime send for FREE 32-page book describing these shutters in detail.

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620—33c; 616—38c

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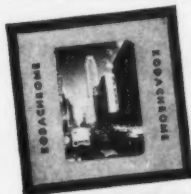
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type photographic work required in science, etc. Complete laboratory equipment available. Three other college courses may be taken simultaneously at no extra cost; tuition \$19.50 a quarter. Course is 12 weeks, 6 to 8 hours a week. Advanced Photography not offered next year.

CHICAGO CAMERA CLUB SCHOOL OF PHOTOGRAPHY, Chicago Camera Club, 137 North Wabash Avenue, Chicago 2, Illinois. Two terms a year, each consisting of class sessions, each Tuesday evening for eight weeks. Tuition \$5 per term. Beginning class starts in late March; advanced class in September. These courses are open to the public. Other instruction arranged from time to time is usually restricted to club members. The public classes grew out of lectures for members begun fifteen years ago and opened the following year to non-members. The class sessions consist of lectures and demonstrations followed by discussion. Instructors are usually club members chosen for their ability to handle specific subjects. Use of the club laboratory is restricted to members.

CHICAGO SCHOOL OF PHOTOGRAPHY, 59 East Van Buren Street, Chicago 5, Illinois. Offers highly specialized course in photography. Intensive personal training as well as correspondence courses. Basic Fundamental Photography, Advanced Professional Photography, Advanced Techniques.

INSTITUTE OF DESIGN, 1001-1029 North State Street, Chicago, Illinois. L. Moholy-Nagy, Director. Shop work, drawing and color, modeling, mechanical drafting for beginners as well as advanced students. The Institute has developed a new method of approach in teaching photography in which the photograph and light modulator play an important part. Camera and cameraless photography, darkroom techniques, developing, contact printing, enlarging, solarization are taught. All equipment available. Illustrated catalog sent on request. The Institute has set up a new two year, full-time course for returning veterans. A year is divided into Fall, Spring and Summer semesters. Certificate is given after completion of course. The Institute is accredited by the government agencies, and has reciprocal credits with leading universities.

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SCHOOL OF PHOTOGRAPHY, Fort Dearborn Camera Club, 75 East Wacker Drive, Chicago, Illinois. Pictorial Photography: negative making, print projection, portrait photography, landscape and Kodachrome photography, composition, etc. Classes start at 7:00 each Tuesday night following the opening meeting

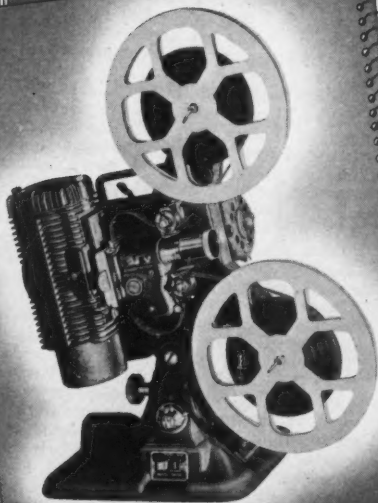
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NORTH ILLINOIS STATE TEACHERS COLLEGE, DeKalb, Illinois. Mr. Loren T. Caldwell, Instructor. Instruction given in indoor and outdoor photography by daylight and artificial light; colored objects in black and white, exposure, control lighting, shutter speed, laboratory practice, color photography and its phases, micro-photography, lantern-slide making, portraiture and copying. Major emphasis is placed upon photography as a teacher skill with the study of the candid camera shot and the miniature camera. Tuition \$15.25 per quarter for 12 weeks, 4 hours a week.

PRINCIPIA COLLEGE, Elmhurst, Illinois. Percival Robertson, Instructor. Course in Elementary Photography when there is sufficient demand made by regular students taking courses at the college. One course credit given. College tuition \$400 per year of three quarters, or \$145 per quarter.

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BARAT COLLEGE OF THE SACRED HEART, Lake Forest, Illinois. General Technique of Photography and developing offered as part of regular science classes. Given during Fall and Spring terms; no prerequisite necessary.

Peoria Cinema Club's **SCHOOL OF CINEMATOGRAPHY**, 700 Ravine Avenue, Peoria, Illinois. Dr. A. K. Baumgardner, Instructor. Course in cinematography which consists of six lectures given one each month during winter season. Laboratory demonstrations are made and illustrated slides show composition, exposure, etc. Tuition is club membership fee of \$3.00 per year.

UNIVERSITY OF ILLINOIS, Urbana, Illinois. Physics Department offers course in photography designed to familiarize student with photographic techniques, equipment and materials. Course is not given regularly now; information may be obtained from P. Gerald Kruger, Physics Department. Prerequisite of General Physics or consent of instructor. Course is restricted to regular students. Tuition is \$40 for Illinois-residents; \$80 for out-of-town students.

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FREE LANCE PHOTOGRAPHY

(Continued from page 42)

sent liaisons teams of officers, engineers and photographers whenever the Chinese attacked. Early in May the job was to drive the Japs from Yunnan, and re-open the Burma Road. I was shipped "over the Hump" and ordered to get pictures of the Salween campaign. After following a guide up and down mountains for ten days, nine of them in pouring rain, we arrived at a village near the east bank of the Salween River.

After a night in a jungle hammock, Private Hedge (Arthur W. Hedge of 136 Eighth Avenue, W., Dickinson, N. D., a movie cameraman) and I figured it would be best if we got down the river first to photograph the troops approaching, but little did we know that the trip to the Salween River was a five-hour, straight-down slide.

It was early in the morning when we arrived at the river. The American rubber assault boats were filled with Chinese troops and there wasn't much room to work. Hedge took his pictures first and I was his assistant. The weather was perfect, and using the 35mm bomb spotter camera and changing lenses quite often, Hedge got very good coverage. I then took my pictures with the Graphic, getting close-ups and long shots.

We crossed the river in the boats, but couldn't shoot any pictures as the trip was too rough.

"Hedge's equipment, which he carried all the time because the Chinese coolies left us at the river, consisted of the 35mm motion picture camera, the bomb spotter, a musette bag loaded with film and another with his 16mm magazine and film. Around his neck was the 35mm Kodak 35, which he used to get follow-up shots for his movie story.

I had a 4x5 Graphic in my hand and on my back in my musette bag I had my flash gun, extra film packs, another film pack adapter, flash bulbs and filters.

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mountains, we accompanied the Chinese forward to the vicinity of Pingka, one of the earlier objectives of the campaign.

One morning at four o'clock we were routed out of our hammocks and left division headquarters in darkness for the front, as the attack on the Jap positions on Pingka ridge was to start at dawn.

We were to shoot action pictures—if possible, without getting hurt. Hedge, myself, a Y-Force liaison officer, two interpreters, four coolies to carry our equipment, and two Chinese riflemen, made up the party.

It was a tough climb, almost straight up for several hours, and no fun. We carried our cameras in our hands, just in case, while the coolies had our extra film and stuff. Hedge had his 35mm movie and I my Graphic and Leica.

We continually passed former Jap dug-outs and smelled the stench of the dead.

It was light by the time we got to Chinese regimental headquarters and, after getting information from a Chinese colonel and taking a few pics of the set-up, we took off for a battalion.

Our bodyguards—who carried tommy-guns—walked in front, to a battalion O. P. (observation post) just a scant half-mile from the Jap positions on Pingka ridge.

The major in charge of the O. P. showed us the situation on his map and gave us all the cooperation necessary to take pics. The attack had started and for the first time I heard the din of battle. My heart jumped a few beats when the first shell of the Chinese artillery whizzed over our heads, headed for the Japs.

We took pictures of the mortars firing and of infantry about to leave to attack another flank, Hedge movies and I stills. We could see the mortars hitting, but were still too far away to see the Japs themselves. The Nips had been there over two years and were really dug in.

After lunch of rice and meat, we went forward where we could see the pillboxes, but they were still too far away from us for close-ups. I shot some long shots and then followed some litter-bearers to get



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SGT. SYDNEY GREENBERG testing a Chinese rain hat, during the monsoon rains.

pics of them carrying the wounded.

The litter-bearers were 50 yards ahead of us as we moved into a little valley overlooked by Pingka ridge. Hedge had his carbine on his back, and I had my .45 on my hip. Our cameras were in our hands—we were supposed to be out of the firing area.

As we made a sharp turn in the trail we heard a burst of machine-gun fire ahead and we hit the dirt very hard. Scared quite a bit, Hedge and I decided it wasn't safe to hang around. We got our guards, who didn't seem to mind the firing but kept telling us it was "jih pem" (Japanese). We crawled back, but fast, where we came from.

The machine-gun fire from a hidden nest, which hadn't been there when we passed that morning, killed all the litter-bearers. A young guerilla in blue cotton clothes was sent out to get the nest. I got pictures of him leaving, and never saw him again.

It was almost sundown, and we decided to spend the night at the battalion O. P., where the major loaned us a blanket. Sitting in a dugout trench, it was almost like a motion picture—the bursts of hand

grenades, the shouts of the charge, the occasional sob of a man hurt, flares lighting up the sky—red and blue and green and then a white one.

It rained and we were very miserable that night. We were awakened several times by the heavy firing, and every now and then a Jap sniper's bullet whizzed through the trees above us.

Rice and meat again for breakfast and both of us had a case of the G. I.'s (mild dysentery). I used a gas cape to keep my film dry. Every time I pulled a paper from my film pack I got two films instead of one and my Leica ceased to operate, the damp film sticking to the pressure plate.

We spent the day in the dugout, our cameras ready, but the weather wouldn't let up. A China monsoon rain is not like any other rain: when it rains here it really rains. I photographed some wounded at an aid station and had to run back to the dugout to escape being drowned.

My flash gun shorted because of dampness. We felt like hell, all wet and couldn't

get rid of the G. I.'s. Night fell and all we talked about was the lack of food. Rice tastes good only for a while. Two meals a day and both rice—what a diet for a growing boy.

The chrome and the leather is all off of my Graphic. At night I put it in the gas cape and then put the whole package in a musette bag, but the next morning it was covered with mold, even inside the lens board.

Hedge's camera was standing up—nothing wrong at all. That bomb spotter was O. K. His 35mm Kodak had a case of termites when he hung it on a tree and a mother termite (pregnant, of course) crawled inside. We had to spend the afternoon smoking them out.

After several months of this existence, I was recalled to a headquarters, where I am now working in a photographic laboratory as a rest.

Picture credits: Page 42 by Richardson from Yank Magazine; pages 43-47 by Tech. Sgt. Sydney Greenberg; page 108 by Staff Sgt. N. R. Ackerman.



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Closing Date	Name of Salon	For Entry Blank, Write to	Number of Prints and Entry Fee		Dates Open to Public
Exhibit to see	★Eighth Memphis Pictorialists Salon.				Brooks Art Gallery, Memphis, Tenn., July 1-31
Exhibit to see	1945 Annual International Salon of Muncie Camera Club.				Arts Building, Muncie Fairgrounds, Muncie, Ind., July 29-Aug. 4
Exhibit to see	★Sixth Annual North American Salon.				E. B. Crocker Art Gallery, Sacramento, Calif., Aug. 1-31
Exhibit to see	★14th Detroit International Salon of Photography.				Detroit Institute of Arts, Detroit, Mich., Aug. 5-Sept. 2
August 15	Eighth Annual Rocky Mountain Salon of Photography.	Mr. Basil Leonoff, 1435 S. Milwaukee St., Denver 10, Colo.	4	\$1.00	Denver Art Museum, Denver, Colo., Sept. 1-15
August 20	Third Annual Dayton Salon of Photography.	Dayton Art Institute, Dayton 5, Ohio.	4	\$1.00	Dayton Art Institute, Forest and Riverview Aves., Dayton, Ohio, Sept. 2-30
August 25	Fifty-fourth Toronto International Salon of Photography.	F. L. Harvey, Toronto Camera Club, 2 Gould St., Toronto 2, Ont., Canada.	4	\$1.00	Eaton's Fine Art Galleries, Toronto, Canada, Sept. 10-22
September 1	★1945 Pasadena International Salon of Photography.	William Reynolds, 315 S. Catalina Ave., Pasadena 5, Calif.	4	\$1.00	Pasadena Art Institute, Pasadena, Calif., Sept. 15-Oct. 21
September 1	★Amarillo International Salon (formerly Tri-State Salon).	Cy Clemmons, 216 Nunn Building, Amarillo, Texas.	4	\$1.00	Arts and Crafts Center, Amarillo, Texas, Sept. 16-30
September 5	★Mississippi Valley Salon of Photography.	Paul K. Pratte, Salon Chairman, 5741 Winona Ave., St. Louis 9, Mo.	4 Prints and/or 6 Color transparencies.	\$1.00	The Artists' Guild, St. Louis, Mo., Sept. 15-30
September 10	★Fifth Annual Victoria International Salon of Photography.	Irvine Dawson, Salon Director, 680 Victoria Ave., Victoria, B. C., Canada.	4	\$1.00	Empress Hotel, Victoria, Canada, Oct. 7-14
September 23	★Second International Color Slide Salon.	Frin Vanden, 620 N. Michigan, Chicago 11, Ill.	6	\$1.00	Chicago Historical Society, Clark St., and North Ave., Chicago, Ill., Oct. 7-15
October 10	★Tenth International Salon of Photography of the Photo Pictorialists of Milwaukee.	Donald K. Meehan, Salon Chairman, Photo Pictorialists of Milwaukee, 740 N. Plankinton Ave., Milwaukee, Wis.	4	\$1.00	Milwaukee Public Library and Museum Bldg., Milwaukee, Wis., Nov. 4-18
October 15	Thirty-sixth Chicago Salon.	Chicago Camera Club, 137 N. Wabash Ave., Chicago 2, Ill.	4 Monochrome and/or 4 color	\$1.00	Chicago Camera Club, 137 N. Wabash Ave., Chicago, Ill., Nov. 5-Dec. 4

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